Crowther, Joan (DEQ)

From: Ignatius Mutoti [ignatius.mutoti@retaweng.com]
Sent: Tuesday, December 27, 2011 4:54 PM
To: Crowther, Joan (DEQ); 'Chris Thomas'
Subject: RE: Update complete letter for Hopyard WWTP
Attachments: HY VPDES App_2011_Final.pdf

Ms Joan
Here is a complete revised application for your records.

Thank you

HAPPY HOLIDAYS!!!

Ignatius Mutoti PhD, PE, Class II Operator
RETAW ENGINEERING
Phone:804.744.1792 | Cell:804.245.2979

From: Crowther, Joan (DEQ) [mailto:Joan.Crowther@deq.virginia.gov]
Sent: Tuesday, December 27, 2011 4:40 PM
To: Ignatius Mutoti; Chris Thomas
Subject: RE: Update complete letter for Hopyard WWTP

Ok. Thanks for clarifying.

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3925 Fax number (703) 583-3821

Email address: joan.crowther@deq.virginia.gov

From: Ignatius Mutoti [mailto:ignatius.mutoti@retaweng.com]
Sent: Tuesday, December 27, 2011 4:26 PM
To: Crowther, Joan (DEQ); 'Chris Thomas'
Subject: RE: Update complete letter for Hopyard WWTP

Ms Crowther –
The statement that sample results for TDS and FOG were still pending is an error. All three scans were submitted (see number of samples indicated in B.6).
Please see attached lab results sheets dated:
- Oct 25, 2011, Nov 1, 2011 and Nov 8, 2011

Also, please find a revised B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY), sheet. One of the TDS sample results was 466, but was previously entered as 446. This data entry error has been corrected as well as the corresponding average TDS value.

Please let me know if you have any additional questions or concerns.

HAPPY HOLIDAYS!!!

Ignatius Mutoti PhD, PE, Class II Operator
RETAW ENGINEERING
Phone:804.744.1792 | Cell:804.245.2979

From: Crowther, Joan (DEQ) [mailto:Joan.Crowther@deq.virginia.gov]
Sent: Tuesday, December 27, 2011 3:13 PM
To: Chris Thomas; Ignatius Mutoti
Subject: Update complete letter for Hopyard WWTP

Chris and Ignatius,

Please find attached my December 27, 2011,Application Complete Letter update for Hopyard WWTP VPDES Permit Application. Please let me know if you have any questions.

Joan

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3925 Fax number (703) 583-3821

Email address: joan.crowther@deq.virginia.gov

HOPYARD FARMS
WASTE WATER TREATMENT PLANT

VPDES PERMIT No. VA 0089338

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION - 2011

KING GEORGE COUNTY SERVICE AUTHORITY
9207 Kings Highway
King George, VA 22485
Phone: (540)775-2746
Fax: (540) 775-5560

Prepared and submitted by:

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, VA 23112
Phone: (804) 744-1792 / (804) 245 2979
Fax: (804) 545-9072
E-mail: info@retaweng.com

October 21, 2011
Revised December 27, 2011

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, Virginia 23112
Phone: (804) 744-1792 | **Cell**: (804) 245-2979 | **Fax**: (804) 545-9079
Website: http://www.retaweng.com | **Email**: Info@retaweng.com

December 27, 2011

Sent Via- Email

Ms Joan C. Crowther,
Permit Writer, Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Re: Application for VPDES Permit No. VA0089338, Hopyard Farms Waste Water Treatment Plant (WWTP)

Dear Ms. Joan Crowther
The application for the Hopyard Farm WWTP VPDES permit # VA0089338 was submitted on October 21, 2011 on behalf of King George Service Authority (KGCSA). We received a letter from your office dated December 27, 2011 requesting outstanding TDS and Fats Oil and Grease test results for EPA Form 2A B.6

In response to your letter, we offer the following answers:

- The statement in the cover letter stating that two more lab test results were still pending is incorrect.
- Test results for all EPA required minimum three (3) scans (minimum) was previously submitted in EPA Form 2A Part B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).
- As confirmation, we submitted via separate email, Lab test results for TDS, and FOG date 10/25/2011, 11/01/2011 and 11/08/2011.
- We have corrected an error in which one of the TDS results was incorrectly entered as 446 instead of 466. A summary of these results is provided below:

Date	Total Dissolved Solid, mg/L	Conductivity, µmhos/cm	Fats, Oils and Grease, mg/L
10/25/2011	448	700	6.3
11/1/2011	442	631	6.0
11/8/2011	466	676	6.0
Average	452	669	6.1

Should you have any questions or need clarifications regarding this application, please feel free to contact me at (804) 245 2979 or Mr. Christopher F. Thomas, P.E., at the King George County Service Authority, (540) 775-8563.

Very Truly Yours,

Ignatius Mutoti, PhD, PE
Retaw Engineering

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Douglas W. Domenech
Secretary of Natural Resources

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

David K. Paylor
Director

Thomas A. Faha
Regional Director

December 27, 2011
Via Email

Mr. Christopher F. Thomas, P. E.
(cthomas@co.kinggeorge.state.va.us)
General Manager
King George County Service Authority
9207 Kings Highway
King George, VA 22485

Re: VPDES Permit No. VA0089338, Hopyard Wastewater Treatment Plant, King George County

Dear Mr. Thomas:

Your revised application dated October 21, 2011 revised November 15, 2011, received by email dated December 6, 2011, has been reviewed and appears to be complete except for the following item:

EPA Form 2A – Section B.6. You have submitted one of the three test results required by the application for oil and grease and Total Dissolved Solids. You have stated that the remaining two scans are pending with no dates as to when these results will be submitted. Please submit these test results by no later than February 29, 2012.

The next steps involve assembling the information necessary to develop the permit limitations and then drafting the permit. I expect to have the draft permit prepared in the next 3 to 4 months. Once the draft permit is prepared and the appropriate reviews are performed, I will transmit the draft permit and supporting documentation to you for review.

Please contact me at (703) 583-3925 or joan.crowther@deq.virginia.gov if you have questions about our procedures or the status of your draft permit.

Sincerely,

Joan C. Crowther
VPDES Permit Writer

cc: Ignatius Mutoti, Retaw Engineering *(via email Ignatius.Mutoti@retaweng.com)*
VA0089338 Reissuance File

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, Virginia 23112
Phone: (804) 744-1792 | Cell: (804) 245-2979 | Fax: (804) 545-9079
Website: http://www.retaweng.com | Email: Info@retaweng.com

November 15, 2011

Sent Via- Email

Ms Joan C. Crowther,
Permit Writer, Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Re: Application for VPDES Permit No. VA0089338, Hopyard Farms Waste Water Treatment Plant (WWTP)

Dear Ms. Joan Crowther
The application for the Hopyard Farm WWTP VPDES permit # VA0089338 was submitted on October 21, 2011 on behalf of King George Service Authority (KGCSA). We received a letter from your office dated November 1, 2011 stating that the application had been reviewed and appears to be complete except for seven items addressed below as follows:

1. **Permit Application Fee Form:** Please discard and disregard permit application fee form that was send with the original renewal application. The KGCSA did not send a check for permit application fee check to the Treasurer of Commonwealth of Virginia. Instead, the KGCSA pays an annual permit maintenance fee for the Hopyard Farm WWTP

2. **EPA Form 2A Section A9.b.** We have revised the longitude/latitude location of the discharge Outfall 001 to be N 38° 14' 39" / W -77° 13" 32". Additionally, we have included an area of the Hopyard WWTP service area from the County GIS data showing location and coordinates of the Outfall 001 and the Outfall plan and profile from the As-built drawings.

3. **EPA Form 2A Section A9.b.** The invert for Outfall 001 is located at 2.8 ft below the mean water surface level (see attached As-built drawing of the Outfall)

4. **EPA Form 2A Maximum daily flow rates A.6:** Flow figures have been revised to reflect the one-day maximum daily flow rate, in million gallons per day (mgd), that the plant received this year and each of the past two years (2009: 0.2838 MGD, 2010: 0.33786 MGD, 2011: 0.3125 MGD)and not the average maximum daily figures as previously stated.

5. **EPA Form 2A Section B.6 EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).** Please replace page 8 of 21 with the update page which includes one (1) scan for Oil & Grease and Total Dissolved Solids and Specific Conductance. Two more test results will be provided (not specified date from the laboratory).

   Please replace EPA Form 2A Part C with the re-certified page

6. **Section A.8 of the VPDES Sewage Sludge Permit Application Form:** The DEQ granted a waiver for additional sludge cake testing on 11/08/11 since the sludge is disposed of in a landfill. However, the VPDES Sludge Permit Application has been update to change Parcel Tax Map information where Outfall 001 is located 31-1. Please replace the Sludge Application form and page 4 of 18 of the VPDES Sludge Application Addendum which has been re-certified.

7. Laboratory test results for parameters required per VPDES Permit Attachment A Test Results (1/5yr) testing and two addition test results for Oil and Grease and Total Dissolved Solids are still pending. The laboratories have not indicated when these results will be available. The results will be forward to you upon receipt.

Should you have any questions or need clarifications regarding this application, please feel free to contact me at (804) 245 2979 or Mr. Christopher F. Thomas, P.E., at the King George County Service Authority, (540) 775-8563.

Very Truly Yours,

Ignatius Mutoti, PhD, PE
Retaw Engineering

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, Virginia 23112
Phone: (804) 744-1792 | **Cell**: (804) 245-2979 | **Fax**: (804) 545-9079
Website: http://www.retaweng.com | **Email**: Info@retaweng.com

October 21, 2011

Sent Via- Email

Ms Joan C. Crowther,
Permit Writer, Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Re: Application for VPDES Permit No. VA0089338, Hopyard Farms Waste Water Treatment Plant (WWTP)

Dear Ms. Crowther:
We are pleased to submit this VPDES permit application package for the Hopyard Farms WWTP on behalf of the King George Service Authority. This application is for the renewal of the existing two (2) tier VPDES permit (VA0089338): 0.375 MGD and 0.5 MGD which expires June 22, 2012. Per your letter dated August 1, 2011, the application must be submitting by October 25, 2011 or 180 days before the expiration date. A hard copy of this application has been mailed to you.

This application contains the following documents:

1.	Cover Letter		1
2.	Permit Fee Schedule		2
3.	EPA Form 1		2
	a. Topography Map & Vicinity Map	1	
4.	EPA Form 2A		22
5.	Vicinity & Topographic Map	1	
6.	Location of Wastewater Treatment Plant & Service Area	1	
7.	Description of existing facility		
	a. Process Flow Diagram and Chemical Use Narrative	1	
	b. Site Layout, Process Tanks and Yard Piping		1
	c. Hydraulic Profile		1
8.	Attachment A - VPDES Permit Attachment A (1/5Year) Effluent Rest Results		TBD
9.	Attachment B: Test results for Belt Filter Press Sludge Cake		4
10.	VPDES Permit Application Addendum		1
11.	Sludge Application Form		18
12.	Attachment C:		
	a. Description of Sludge generation and handling for the Hopyard Farms WWTP	2	
	b. Wet sludge hauling route from the Hopyard Farms WWTP to the Dahlgren WWTP		1
	c. Process Flow Diagram for sludge digestion and dewater at the Dahlgren WWTP	1	
	d. Dewatered sludge hauling route (Dahlgren WWTP to the King George landfill)	1	
13.	Completed Public Notice & Billing Authorization form		1

Samples have been collected for VPDES permit Attachment A parameters and for Oil and Grease and for Total Dissolved Solids. Test results will be forward to your office upon receipt from the HRSD laboratory.

Should you have any questions or need clarifications regarding this application, please feel free to contact me at (804) 245 2979 or Mr. Christopher F. Thomas, P.E., at the King George County Service Authority, (540) 775-8563.

Very Truly Yours,

Ignatius Mutoti, PhD, PE
Retaw Engineering

Please print or type in the unshaded areas only. Approved. OMB No. 2040-0086.

FORM 1 GENERAL	EPA	ENVIRONMENTAL PROTECTION AGENCY **GENERAL INFORMATION** *Consolidated Permits Program* *(Read the "General Instructions" before starting.)*	EPA I.D. NUMBER

	I.D.	T/A	C
F	VA0089338		D
1	2 — 13	14	15

LABEL ITEMS		GENERAL INSTRUCTIONS
I. EPA I.D. NUMBER	PLEASE PLACE LABEL IN THIS SPACE	If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.
III. FACILITY NAME		
V. FACILITY MAILING ADDRESS		
VI. FACILITY LOCATION		

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X		X	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area?** (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

C	SKIP	
1		HOPYARD FARMS WASTEWATER TREATMENT PLANT
15	16 - 29	30 — 69

IV. FACILITY CONTACT

C	A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2	HOCKADAY, JEFF, WASTEWATER MANAGER	(540) 775-2746
15	16 — 45	46 — 48 | 49 — 51 | 52 — 55

V. FACILTY MAILING ADDRESS

C	A. STREET OR P.O. BOX
3	9207 KINGS HIGHWAY
15	16 — 45

C	B. CITY OR TOWN	C. STATE	D. ZIP CODE
4	KING GEORGE	VA	22485
15	16 — 40	41 — 42	47 — 51

VI. FACILITY LOCATION

C	A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER
5	State 607-SOUTHSIDE of intersection of State Route 607&3
15	16 — 45

B. COUNTY NAME
King George
46 — 70

C	C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6	King George	VA	22485	
15	16 — 40	41 — 42	47 — 51	52 — 54

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
7 4952 *(specify)* Sewage Treatment Plant or Facility	7 *(specify)*
C. THIRD	**D. FOURTH**
7 *(specify)*	7 *(specify)*

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
8 King George County Service Authority	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other," specify.)*		D. PHONE *(area code & no.)*
F = FEDERAL S = STATE P = PRIVATE	M = PUBLIC *(other than federal or state)* O = OTHER *(specify)*	M *(specify)*	A (540) 775-2746

E. STREET OR P.O. BOX
9207 Kings Highway

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
B King George	VA	22485	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N VA0089338	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 VAN020056 — *(specify)* VPDES General Permit for Total Nitrogen and Total Phosphorus Discharges and Watershed Trading in the Chesapeake Watershed, Virginia
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R	9 *(specify)*

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Wastewater Treatment Plant in King George County, Virginia.

The existing plant (Phase I) is design 0.375 MGD of domestic wastewater serving 898 residential lots, and 33 Acres of Commmercial property, a Library, Fire Station and Clubhouse.

Phase II expansion of the plant will increase the design capacity to 0.5 MGD.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Christopher F. Thomas PE, General Manager	Christopher F. Thomas	10/21/2011

COMMENTS FOR OFFICIAL USE ONLY

C

FACILITY NAME AND PERMIT NUMBER
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Hopyard Farm Wastewater Treatment Plant

Mailing Address: 9207 Kings Highway
King George, VA 22485

Contact person: Jeff Hockaday

Title: Wastewater Manager

Telephone number: (540) 775-2746

Facility Address (not P.O. Box): State Road 607, south of the intersection of State Route 3 and 607, King George, VA 22485

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name: King George County Service Authority

Mailing Address: 9207 Kings Highway
King George, VA 22485

Contact person: Christopher F. Thomas, PE

Title: General Manager

Telephone number: (540) 775-2746

Is the applicant the owner or operator (or both) of the treatment works?

✓ owner ✓ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

_____ facility ✓ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES: VA0089338
PSD: _____
UIC: _____
Other: VAN020056 (VPDES Nutrient General Permit)
RCRA: _____
Other: _____

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
134 Residential Units	334	Force Main/Gravity	Municipal
Fire Station + Library	0	Force Main/Gravity	Municipal
110 000 sq.ft Commercial ,	0	Force Main/Gravity	Municipal
Total population served	334		

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

_____ Yes ✓ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

_____ Yes ✓ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.375 mgd Phase I / Phase II: 0.5 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	0.0204	0.0175	0.0141	mgd
c. Maximum daily flow rate	0.2738	0.3376	0.3125	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

✓ Separate sanitary sewer	100 %
_____ Combined storm and sanitary sewer	_____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ✓ Yes _____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	1
ii. Discharges of untreated or partially treated effluent	0
iii. Combined sewer overflow points	0
iv. Constructed emergency overflows (prior to the headworks)	0
v. Other _____	0

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? _____ Yes ✓ No

If yes, provide the following for each surface impoundment:

Location: _____

Annual average daily volume discharged to surface impoundment(s) _____ mgd

Is discharge _____ continuous or _____ intermittent?

c. Does the treatment works land-apply treated wastewater? _____ Yes ✓ No

If yes, provide the following for each land application site:

Location: _____

Number of acres: _____

Annual average daily volume applied to site: _____ Mgd

Is land application _____ continuous or _____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? _____ Yes ✓ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide: N/A

Transporter name:

Mailing Address:

Contact person:

Title:

Telephone number:

For each treatment works that receives this discharge, provide the following: N/A

Name:

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? _____ Yes ✓ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method:

Is disposal through this method _____ continuous or _____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a**, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number: 001

b. Location:
Hop Yard Landing (City or town, if applicable) — 22845 (Zip Code)
King George (County) — VA (State)
38° 14' 39" N (Latitude) — -77° 13' 32' W (Longitude)

c. Distance from shore (if applicable): 100 ft.

d. Depth below surface (if applicable): 2.8 ft.

e. Average daily flow rate: 0.0221 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ✓ Yes ____ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: 39

Average duration of each discharge: 24 hours

Average flow per discharge: 0.2102 mgd

Months in which discharge occurs: All12 months of the year

g. Is outfall equipped with a diffuser? ____ Yes ✓ No

A.10. Description of Receiving Waters.

a. Name of receiving water: Rappahannock River

b. Name of watershed (if known): Rappahannock River

United States Soil Conservation Service 14-digit watershed code (if known): ____

c. Name of State Management/River Basin (if known): ____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): ____

d. Critical low flow of receiving stream (if applicable):
acute N/A cfs chronic N/A cfs

e. Total hardness of receiving stream at critical low flow (if applicable): N/A mg/l of $CaCO_3$

A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

_____ Primary ✓ Secondary

_____ Advanced _____ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	85	%
Design SS removal	85	%
Design P removal	75	%
Design N removal	80	%
Other _____	_____	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Disinfection

If disinfection is by chlorination, is dechlorination used for this outfall? _____ Yes _____ No

d. Does the treatment plant have post aeration? ✓ Yes _____ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.0	s.u.			
pH (Maximum)	9.0	s.u.			
Flow Rate	0.3376	mgd	0.0221	mgd	39
Temperature (Winter)	5.0	°C	9.2	°C	90
Temperature (Summer)	28	°C	25.9	°C	91

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	28.0	mg/L	5.1	mg/L	105	5210 (B)	2
	CBOD-5							
~~FECAL COLIFORM~~ E. Coli		179	cfu/100mL	8	# /100 mL	123	EPA 1600	1
TOTAL SUSPENDED SOLIDS (TSS)		29.3	ppm	7.5	ppm	105	2540 (D)	1

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

0 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

None required

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.) SEE HOPYARD FARM WWTP VICINITY MAP (FIGURE 1)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

SEE HOPYARD FARMS WWTP PROCESS FLOW SHEET - (FIGURE 2 & ATTACHEMENT C -NARRATIVE)

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ____Yes ✓ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

001

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____Yes ✓ No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

_____

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	___/___/_____	___/___/_____
– End construction	___/___/_____	___/___/_____
– Begin discharge	___/___/_____	___/___/_____
– Attain operational level	___/___/_____	___/___/_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: _____

_____

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	2.0	mg/L	0.15	mg/L	105	4500 -NH3 F	0.1
CHLORINE (TOTAL RESIDUAL, TRC)	NotRequired						
DISSOLVED OXYGEN	13.6	mg/L	8.8	mg/L	105	4500-G	0.1
TOTAL KJELDAHL NITROGEN (TKN)	25.3	mg/L	3.3	mg/L	105	351.4	0.1
NITRATE PLUS NITRITE NITROGEN	65.3	mg/L	15.3	mg/L	105	300.0/4500-NO2-	B 0.1 & 0.01
OIL and GREASE *	6.3	mg/L	6.1	mg/L	3	5520	5
PHOSPHORUS (Total)	3.89	mg/L	0.95	mg/L	105	365.2	0.01
TOTAL DISSOLVED SOLIDS (TDS) *	466	mg/L	452	mg/L	3	2540 C	1
OTHER Specific Conductance	700	umho/cm	669	umho/cm	.	2510 B	1

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

*TEST RESULTTS FOR OIL and GREASE and TOTAL DISSOLVED SOLIS (TDS)

SCANS 2 AND 3 ARE PENDING

SEE Attachment A - LABORATORY TEST RESULTS - 1/5YR

FIGURE 1

VICINITY MAP - HOPYARD FARMs WWTP

Outline of Facility

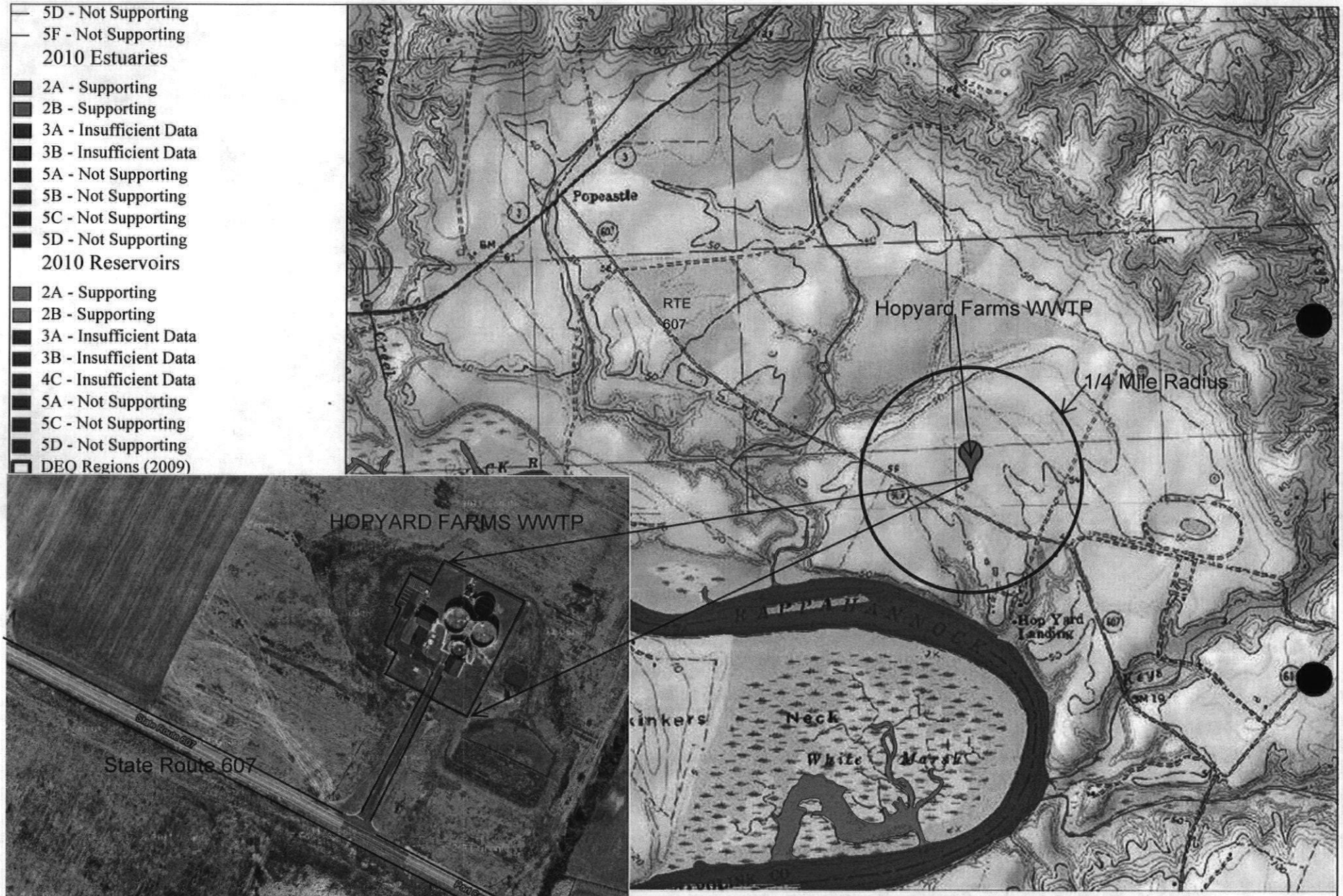
Area surrounding the treatment plant and all Unit processes

Major piping

Any Injection wells

Wells, Springs, and other Water bodies within a ¼ mile radius

Page intentionally left blank

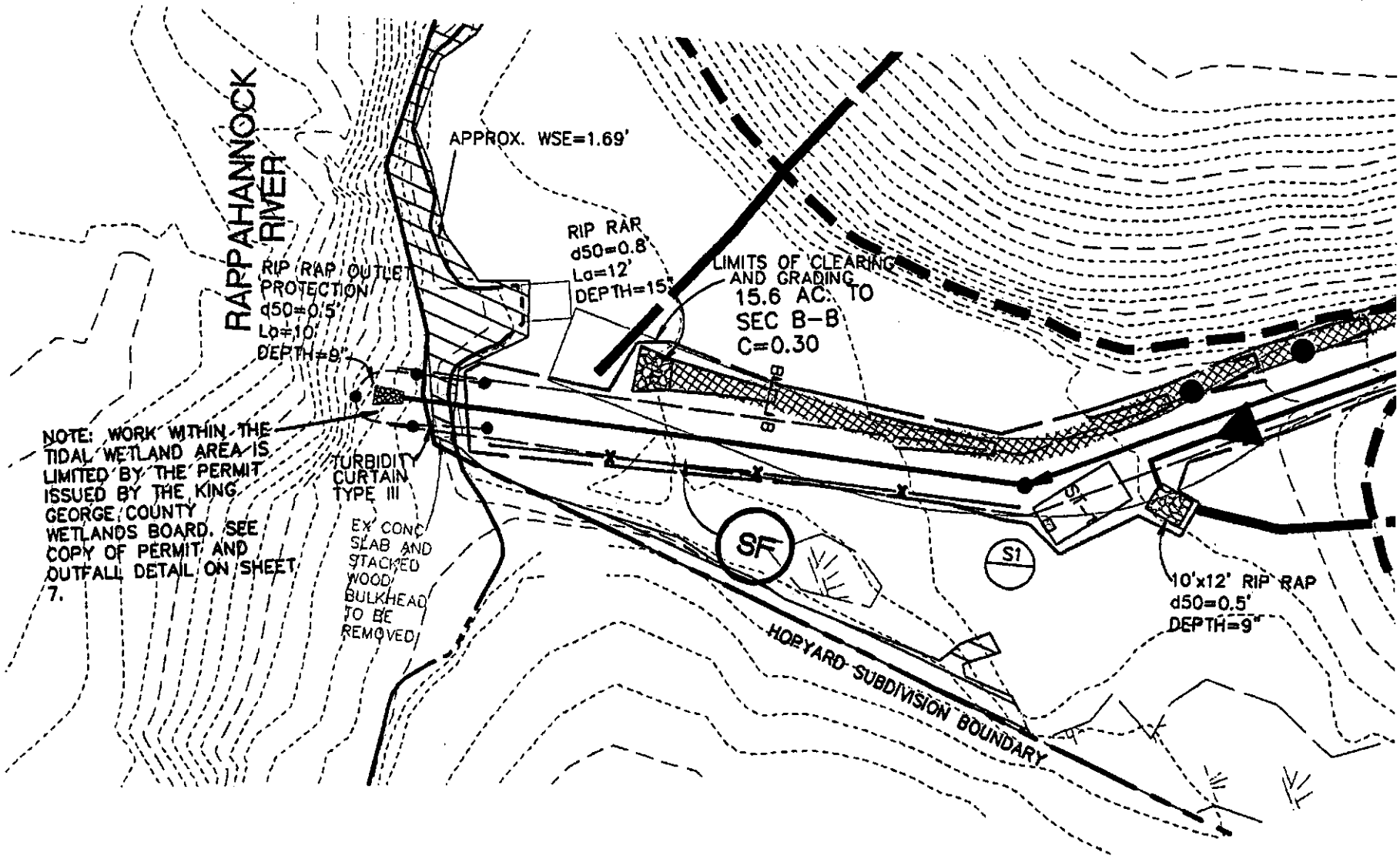


VICINITY MAP -
HOPYARD FARMS WWTP

FIGURE 1.
HOPYARD FARMS WWTP
TOPGRAPHICAL MAP

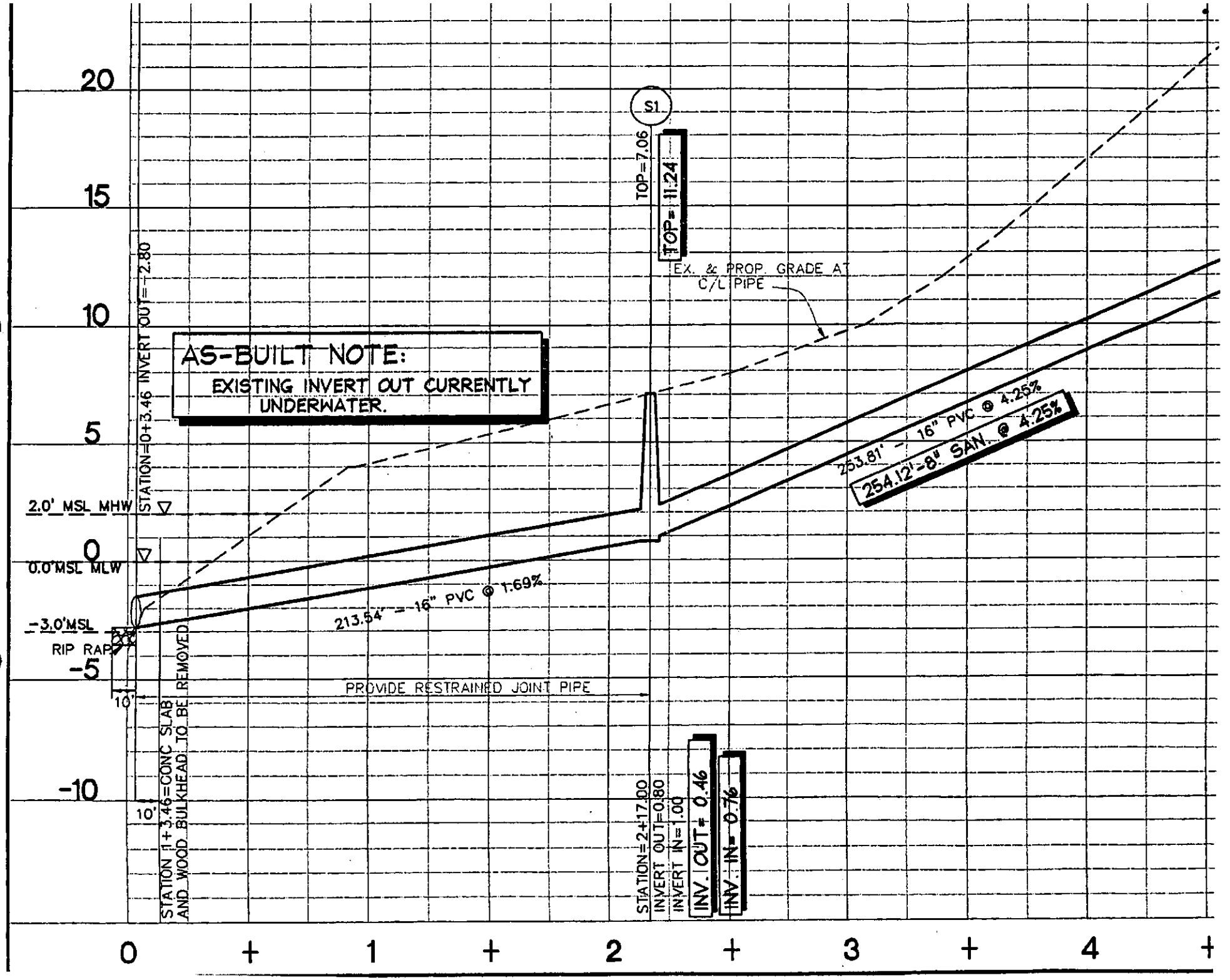
PROJECT NO.
DATE: 10/21/2011
SCALE: AS SHOWN

HOPYARD FARMS WWTP, OUTFALL 001 & SERVICE AREA



GRAPHIC SCALE

0 25 50 100 200


20
15
10
5
0
-5
-10
0 + 1 + 2 + 3 + 4 +
S1
TOP= 7.06
TOP= 11.24
EX. & PROP. GRADE AT C/L PIPE
AS-BUILT NOTE:
EXISTING INVERT OUT CURRENTLY UNDERWATER.
STATION=0+3.46 INVERT OUT=-2.80
2.0' MSL MHW
0.0'MSL MLW
-3.0'MSL
RIP RAP
213.54' - 16" PVC @ 1.69%
253.81' - 16" PVC @ 4.25%
254.12'-8" SAN. @ 4.25%
PROVIDE RESTRAINED JOINT PIPE
10'
10'
STATION 1+3.46=CONC SLAB AND WOOD BULKHEAD TO BE REMOVED
STATION=2+17.00
INVERT OUT=0.80
INVERT IN=1.00
INV. OUT= 0.46
INV. IN= 0.76

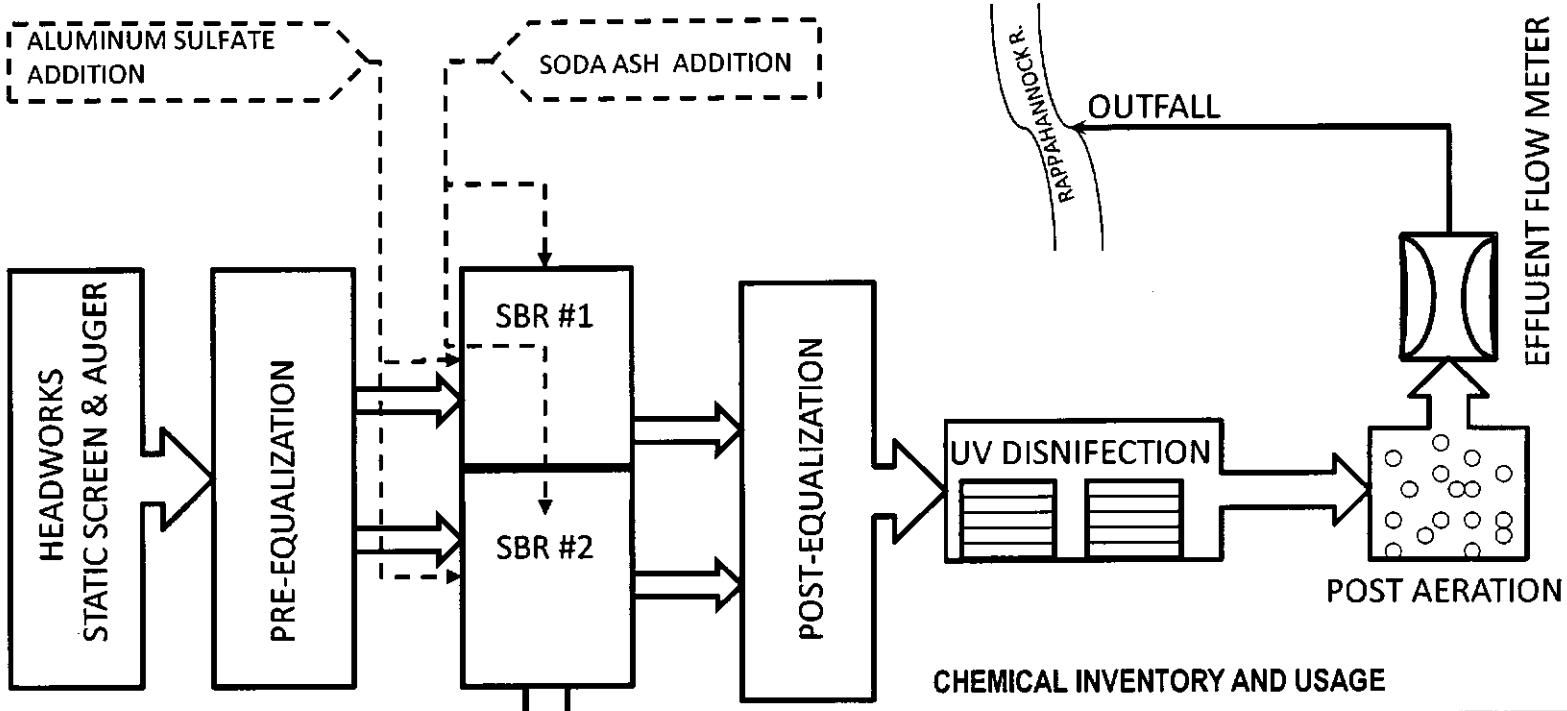
HOPYARD FARMS WASTEWATER TREATMENT PLANT

PROCESS FLOW SCHEMATICS

- FIGURE 2: PROCESS LAYOUT & YARD PIPING

- FIGURE 3: HYDRAULIC PROFILE

HOPYARD FARMS WWTP NARRATIVE



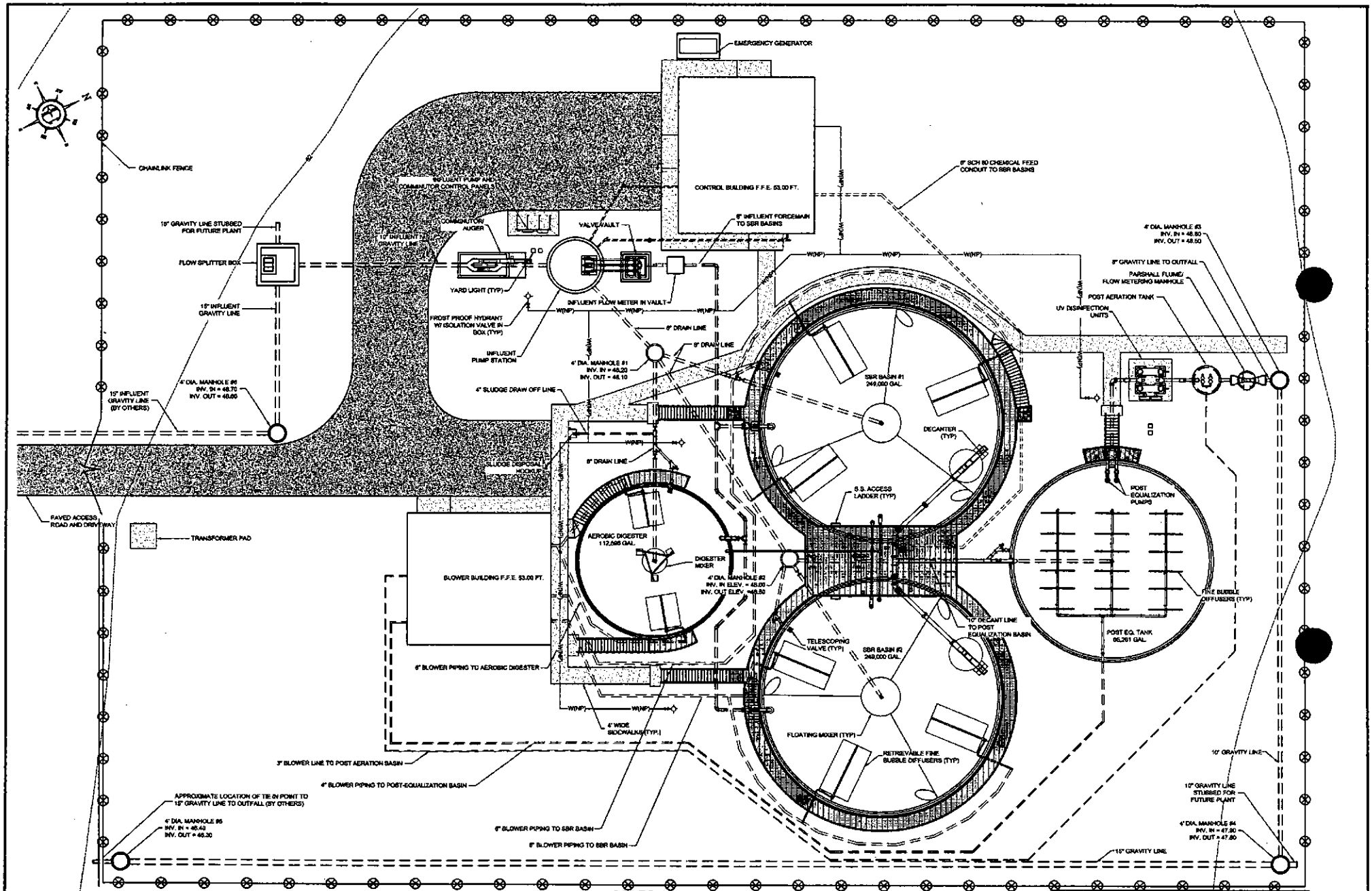
CHEMICAL INVENTORY AND USAGE

ALUMINUM SUFATE (ALUM)
Used to chemically precipitated phosphorus.
Alum is added to each SBR during the REACT phase.
Approximately 1,000 pounds (20 x 50 lb bags) of dry alum are kept at the Plant

SODA ASH
Soda ash (sodium bicarbonate) provided for dosing soda ash into the SBR basins during the fill cycle for mixed liquor alkalinity and pH control in the biological nitrification process, as needed.
Approximately 1,000 pounds (20 x 50 lb bags) of dry alum are kept at the Plant

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
2903 Sagecreek Circle
Midlothian, Virginia 23112
www.retaweng.com

PROJECT NO.: 40828-30-11
DRAWN BY: IGNATIUS MUTOTI, PhD, PE
DATE: 10/21/2011 SCALE: NTS



NOTE:

THE DESIGN OF THE 15" GRAVITY LINE TO THE WWTP SITE AND FROM THE WWTP SITE TO THE OUTFALL IS PROVIDED ON SEPARATE PLANS BY THE ENGINEERING GROUP, INC.

OVERALL EQUIPMENT LAYOUT

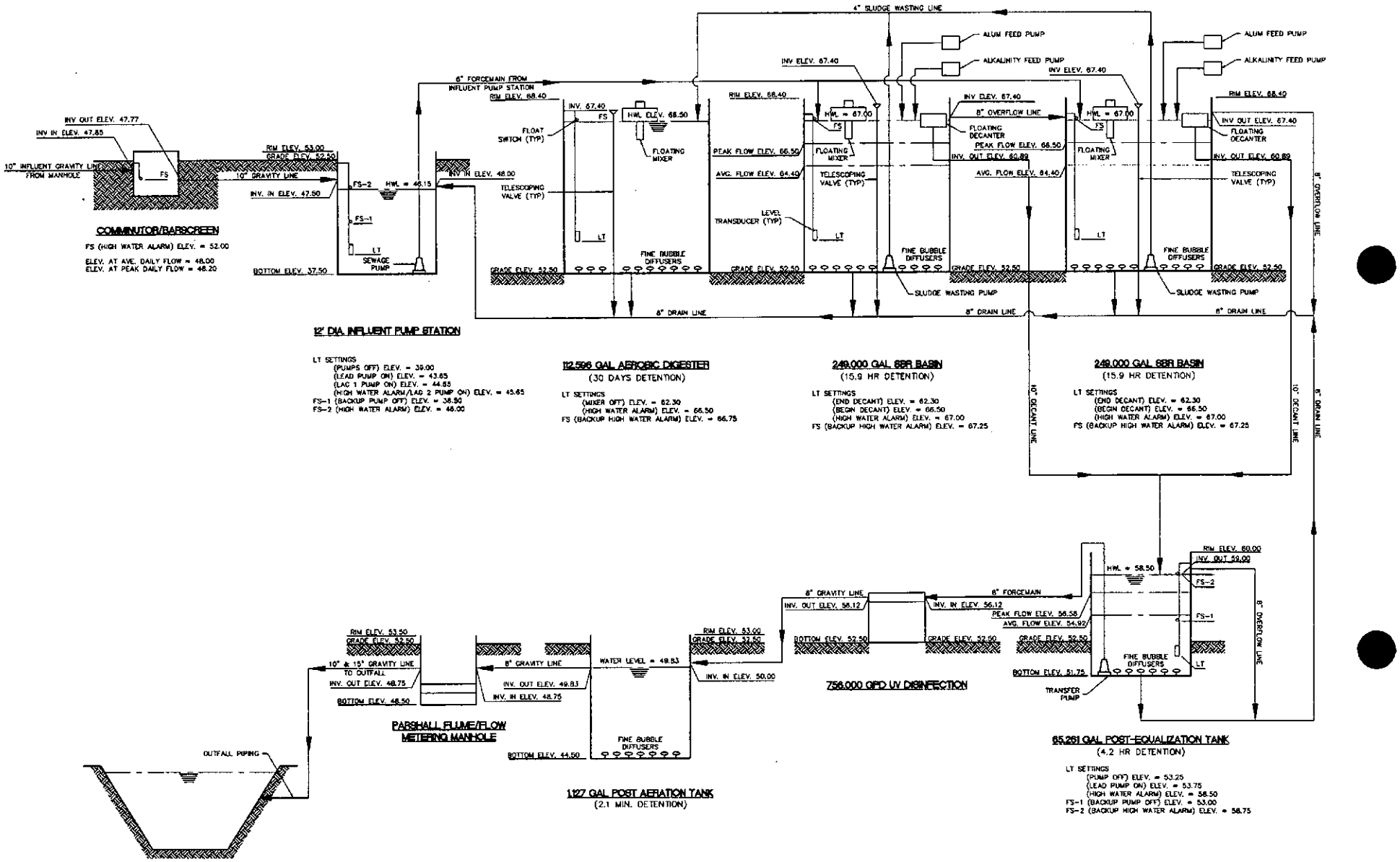
(IN FEET)
1 inch = 10 ft.

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
2603 Sagewood Circle
Midlothian, Virginia 23112
www.retaweng.com

HOPYARD FARMS WASTEWATER TREATMENT PLANT

SITE PLAN & YARD PIPING

PROJECT NO.: 40628-30-11
DWG SOURCE: RECORD DWGS 10/19/04
DATE: 10/21/2011
SCALE: AS SHOWN



HYDRAULIC PROFILE/PROCESS SCHEMATIC

NOT TO SCALE

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
2903 Sagecreek Circle
Midlothian, Virginia 23112
www.retaweng.com

HOPYARD FARMS WWTP	PROJET NO.: 40828-30-11
HYDRAULIC PROFILE	DATE: 10/21/2011
	SCALE: NTS
	SOURCE: AS BUILT DWG 10/19/04

⚠ AVERAGE AND PEAK FLOW ELEVATIONS ADDED.

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

✓ Basic Application Information packet

Supplemental Application Information packet:

_____ Part D (Expanded Effluent Testing Data)

_____ Part E (Toxicity Testing: Biomonitoring Data)

_____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

_____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Christopher F. Thomas PE, General Manager

Signature: Christopher F. Thomas

Telephone number: (540) 775-2746

Date signed: November 15, 2011

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3925
Email address: joan.crowther@deq.virginia.gov

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

N/A

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS $CaCO_3$)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

FACILITY NAME AND PERMIT NUMBE
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLORETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											

FACILITY NAME AND PERMIT NUMBE
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

FACILITY NAME AND PERMIT NUMBER
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

N/A

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

____chronic ____acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	Test number:_____	Test number:_____	Test number:_____
a. Test information.			
Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods followed.			
Manual title			
Edition number and year of publication			
Page number(s)			
c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.			
24-Hour composite			
Grab			
d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)			
Before disinfection			
After disinfection			
After dechlorination			

N/A	Test number:_____	Test number:_____	Test number:_____
e. Describe the point in the treatment process at which the sample was collected.			
Sample was collected:			
f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.			
Chronic toxicity			
Acute toxicity			
g. Provide the type of test performed.			
Static			
Static-renewal			
Flow-through			
h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.			
Laboratory water			
Receiving water			
i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh water			
Salt water			
j. Give the percentage effluent used for all concentrations in the test series.			
k. Parameters measured during the test. (State whether parameter meets test method specifications)			
pH			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			
l. Test Results.			
Acute:			
Percent survival in 100% effluent	%	%	%
LC_{50}			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

Chronic:	N/A		
NOEC	%	%	%
IC_{25}	%	%	%
Control percent survival	%	%	%
Other (describe)			
m. Quality Control/Quality Assurance.			
Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____Yes____No If yes, describe: _____

_____

_____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

_____

_____

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES N/A

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

____Yes____No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____

b. Number of CIUs. _____

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: _____

Mailing Address: _____

_____

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

_____

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): _____

Raw material(s): _____

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____continuous or _____intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____continuous or _____intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits ____Yes ____No

b. Categorical pretreatment standards ____Yes ____No

If subject to categorical pretreatment standards, which category and subcategory?

_____

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

____Yes____No If yes, describe each episode.

_____

_____

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ____Yes ___No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

_____Truck _____Rail _____Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

____Yes (complete F.13 through F.15.) ____No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

_____

_____

_____

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

_____

_____

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

____Yes ____No

If yes, describe the treatment (provide information about the removal efficiency):

_____

_____

b. Is the discharge (or will the discharge be) continuous or intermittent?

____Continuous ____Intermittent If intermittent, describe discharge schedule.

_____

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SUPPLEMENTAL APPLICATION INFORMATION

PART G. COMBINED SEWER SYSTEMS

N/A

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

a. All CSO discharge points.

b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).

c. Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

a. Locations of major sewer trunk lines, both combined and separate sanitary.

b. Locations of points where separate sanitary sewers feed into the combined sewer system.

c. Locations of in-line and off-line storage structures.

d. Locations of flow-regulating devices.

e. Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

a. Outfall number _____

b. Location

_____
(City or town, if applicable) (Zip Code)

_____
(County) (State)

_____
(Latitude) (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Which of the following were monitored during the last year for this CSO?

____Rainfall ____CSO pollutant concentrations ____CSO frequency

____CSO flow volume ____Receiving water quality

f. How many storm events were monitored during the last year? _____

G.4. CSO Events.

a. Give the number of CSO events in the last year.

_____ events (___ actual or ___ approx.)

b. Give the average duration per CSO event.

_____ hours (____ actual or ____ approx.)

c. Give the average volume per CSO event. N/A

_____ million gallons (_____ actual or _____ approx.)

d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

a. Name of receiving water: _____

b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

G.6. CSO Operations.

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

_____

_____

END OF PART G.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

– ATTACHMENT A –

LABORTARY TEST Results

1/5 Year per VPDES Permit Attachment A Schedule

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11/01/11 - County of King George - Hopyard Farm WWTP - Permit Application

This analytical report contains 10 pages . The subcontracted TBT data will be forwarded under separate cover when it is received.

Jeff Hockaday
jhockaday@co.kinggeorge.state.va.us
Manager of Wastewater Operations
10459 Courthouse Drive - Suite 201
King George, VA 22485

Date Sent: 11/23/11

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: October 11, 2011
Expiration Date: June 14, 2012
Certificate # 1248

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Field Blank
Project Code: KG_HOP
Sample Point: FB
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:52
Selenium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:52
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19
Arsenic	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19
Cadmium	EPA 200.8	ug/L	<2.0	2.0	CBATO	11/14/11	11:19
Chromium III (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:52
Chromium VI (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:52
Copper	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	11:19
Lead	EPA 200.8	ug/L	<30	30	CBATO	11/14/11	11:19
Mercury	EPA 245.1	ug/L	<0.2	0.2	SLABOC	11/15/11	13:20
Nickel	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	11:19
Silver	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	13:24
Zinc	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: _____
Lab Manager / QA Manager

Date: 112311

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide[Δ]	ASTM D 4282	ug/L	<10	10	RMORGA	11/02/11	06:15
Chloride	SM 4500-Cl-B	mg	52	5	JGETTI	11/17/11	07:34
Sulfide (Hydrogen sulfide)	ASTM D 4658-03	mg/L	<0.1	0.1	RMORGA	11/07/11	07:30
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	37.0	0.20	SWILLI	11/10/11	07:18
Total Metals							
Chromium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:59
Selenium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:59
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:41
Arsenic	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:41
Cadmium	EPA 200.8	ug/L	<2.0	2.0	CBATO	11/14/11	11:41
Chromium III (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:59
Chromium VI (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:59
Copper	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	11:41
Lead	EPA 200.8	ug/L	<30	30	CBATO	11/14/11	11:41
Mercury	EPA 245.1	ug/L	<0.2	0.2	SLABOC	11/15/11	13:23
Nickel	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	11:41
Silver	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	13:30
Zinc	EPA 200.8	ug/L	42	20	CBATO	11/14/11	11:41

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[Δ] *Parameters is not included in the VELAP scope of accreditation.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<50.0	50.0	SLOPEZ	11/02/11	15:07
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	11/02/11	20:04
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Total Xylenes	EPA 624	ug/L	<30.0	30.0	SLOPEZ	11/02/11	20:04

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dimethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
1,2-Diphenylhydrazine[2,Δ]	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

[Δ] *Parameter is not included in VELAP scope of accreditation.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Pesticides & PCB's							
Aldrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Chlordane	EPA 608	ug/L	ND	0.20	CCURRY	11/11/11	13:49
alpha-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
beta-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDD	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDE	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDT	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Dieldrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Alpha-Endosulfan	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Beta-Endosulfan	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endosulfan sulfate	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endrin aldehyde	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Heptachlor	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Heptachlor epoxide	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Kepone	EPA 8081B	ug/L	<0.06	0.06	CCURRY	11/09/11	19:58
Lindane	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Methoxychlor	EPA 8081B	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Mirex	EPA 8081B	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
PCB 1016	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1221	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1232	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1242	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1248	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1254	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1260	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB Total	EPA 608	ug/L	ND	7.00	CCURRY	11/11/11	13:49
Toxaphene	EPA 608	ug/L	ND	5.00	CCURRY	11/11/11	13:49
Organophosphorous Pesticides							
Demeton[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Guthion	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Malathion[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Chlorpyrifos (Dursban)	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Parathion[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[Δ] *Parameters are not included in HRSD CEL VELAP scope of accreditation.*

Authorization: _____ **Date:** 12311
Lab Manager / QA Manager

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11/01/11 - County of King George - Hopyard Farm WWTP - Permit Application - Subcontracted Data

This subcontracted TBT data report contains 9 pages including the cover sheet.
The report should be attached to CEL data report sent 11/23/11.

Jeff Hockaday
jhockaday@co.kinggeorge.state.va.us
Manager of Wastewater Operations
10459 Courthouse Drive - Suite 201
King George, VA 22485

Date Sent: 12/05/11

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: October 11, 2011
Expiration Date: June 14, 2012
Certificate # 1248

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

DAT Reports®

Data Analysis Technologies, Inc.
7715 Corporate Boulevard
Plain City, OH 43064

Data Summary Table

NOAA 1993-TBT

Client:	Hampton Road Sanitation District	Date:	12/1/2011
Address:	1440 Air Rail Avenue	DAT Project ID:	1111011
	Virginia Beach, VA 23455	Date Received:	11/10/2011
Date Analyzed:	11/30/2011		

Analyst: SM

Analyzed: 11/30/2011

Client Sample ID:	DAT Sample ID:	Analyte:	*Sample MDL, ug/L*	TBT, ug/L	Q
KG-HOP	1111011- 1	Tributyltin	*0.03*	ND	

TBT=Tributyltin
ND=Not detected above the detection limit.
B = Method blank contained a trace level of the compound of interest.
D = Value measured from a dilution.
J = Value less than the low standard.

– ATTACHMENT B –

BELT PRESS CAKE REPORT OF ANALYSIS

(Next three pages)

REPORT OF ANALYSIS

CLIENT: King George County Service Authority
ATTN: Jeff Hockaday
ADDRESS: 10459 Courthouse Dr., Suite 201
CITY: King George, VA 22485
PHONE: (540) 775-2746
FAX: (540) 775-5560

SPECIAL NOTES:

SAMPLE RECEIPT
DATE: 5/18/10 TIME: 1050
GRAB COLLECTION
DATE: 5/18/10 TIME: 1515
COLLECTED BY: CLIENT
PICK UP BY: CLIENT
NUMBER OF CONTAINERS: 3
GOOD CONDITION ☑ Good ☐ Other (See C-O-C)

SAMPLE ID: BELT PRESS SLUDGE CAKE
SAMPLE NO 10-08076

Parameter	EPA HW No.	Method Number	JRA QL	Regulatory Level	Result	Unit	Analyst/Date/Time		
Aroclor 1016		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1221		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1232		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1242		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1248		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1254		8082B	0.03		< 0.03	mg/Kg	DLL	6/2/10	0521
Aroclor 1260		8082B	0.03		< 0.03	mg/Kg	DLL	6/2/10	0521
pH		9045D			6.87@20oC	s.u.	JGM	5/20/10	1612
Paint Filter		9095B			No Free Liquid		JGM	5/28/10	1600
Flashpoint		1010			>100	oC	ARC	5/20/10	1315
Reactive Cyanide		9012B	0.124		< 0.124	mg/Kg	LEF	5/24/10	1058
Reactive Sulfide		9034	4.88		< 4.88	mg/Kg	EFA	5/26/10	1400
Toxic Characteristic Leaching Procedure by SW-846 Method 1311									
Arsenic	D004	6010C	0.005	5	< 0.005	mg/L	TLG	5/28/10	1244
Barium	D005	6010C	0.005	100	0.150	mg/L	TLG	5/28/10	1244
Benzene	D018	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
Cadmium	D006	6010C	0.0005	1	0.0077	mg/L	TLG	5/28/10	1244
Carbon Tetrachloride	D019	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
Chlordane	D020	8270D	0.025	0.03	< 0.025	mg/L	CLH	6/2/10	1610
Chlorobenzene	D021	8260B	0.005	100	< 0.005	mg/L	TAG	5/26/10	1653
Chloroform	D022	8260B	0.005	6	< 0.005	mg/L	TAG	5/26/10	1653
Chromium	D007	6010C	0.001	5	< 0.001	mg/L	TLG	5/28/10	1244

REPORT OF ANALYSIS

SAMPLE ID: BELT PRESS SLUDGE CAKE
SAMPLE NO 10-08076

Parameter	EPA HW No.	Method Number	JRA QL	Regulatory Level	Result	Unit	Analyst/Date/Time		
o-Cresol	D023	8270D	0.025	200	< 0.025	mg/L	CLH	6/2/10	1610
m/p-Cresol	D024	8270D	0.02	200	< 0.02	mg/L	CLH	6/2/10	1610
Cresol	D026	8270D	0.02	200	< 0.02	mg/L	CLH	6/2/10	1610
2,4-D	D016	8151A	0.004	10	< 0.004	mg/L	DLL	6/2/10	2144
1,4-Dichlorobenzene	D027	8260B	0.005	7.5	< 0.005	mg/L	TAG	5/26/10	1653
1,2-Dichloroethane	D028	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
1,1-Dichloroethylene	D029	8260B	0.005	0.7	< 0.005	mg/L	TAG	5/26/10	1653
2,4-Dinitrotoluene	D030	8270D	0.025	0.13	< 0.025	mg/L	CLH	6/2/10	1610
Endrin	D012	8270D	0.005	0.02	< 0.005	mg/L	CLH	6/2/10	1610
Heptachlor (+epoxide)	D031	8270D	0.005	0.008	< 0.005	mg/L	CLH	6/2/10	1610
Hexachlorobenzene	D032	8270D	0.025	0.13	< 0.025	mg/L	CLH	6/2/10	1610
Hexachloro-1,3-butadiene	D033	8270D	0.025	0.5	< 0.025	mg/L	CLH	6/2/10	1610
Hexachloroethane	D034	8270D	0.025	3	< 0.025	mg/L	CLH	6/2/10	1610
Lead	D008	6010C	0.005	5	< 0.005	mg/L	TLG	5/28/10	1244
Lindane	D013	8270D	0.025	0.4	< 0.025	mg/L	CLH	6/2/10	1610
Mercury	D009	6010C	0.005	0.2	< 0.005	mg/L	TLG	5/28/10	1244
Methoxychlor	D014	8270D	0.025	10	< 0.025	mg/L	CLH	6/2/10	1610
Methyl ethyl Ketone	D035	8260B	0.1	200	< 0.1	mg/L	TAG	5/26/10	1653
Nitrobenzene	D036	8270D	0.025	2	< 0.025	mg/L	CLH	6/2/10	1610
Pentachlorophenol	D037	8270D	0.1	100	< 0.1	mg/L	CLH	6/2/10	1610
Pyridine	D038	8270D	0.025	5	< 0.025	mg/L	CLH	6/2/10	1610
Selenium	D010	6010C	0.005	1	< 0.005	mg/L	TLG	5/28/10	1244
Silver	D011	6010C	0.001	5	< 0.001	mg/L	TLG	5/28/10	1244
Tetrachloroethylene	D039	8260B	0.005	0.7	< 0.005	mg/L	TAG	5/26/10	1653
Toxaphene	D015	8270D	0.1	0.5	< 0.1	mg/L	CLH	6/2/10	1610
Trichloroethylene	D040	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
2,4,5-Trichlorophenol	D041	8270D	0.025	400	< 0.025	mg/L	CLH	6/2/10	1610
2,4,6-Trichlorophenol	D042	8270D	0.025	2	< 0.025	mg/L	CLH	6/2/10	1610
2,4,5-TP	D017	8151A	0.004	1	< 0.004	mg/L	DLL	6/2/10	2144
Vinyl Chloride	D043	8260B	0.01	0.2	< 0.01	mg/L	TAG	5/26/10	1653

REPORT OF ANALYSIS

NOTE: JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

Flashpoints <60oC are considered hazardous according to Hazardous Waste Characterization Guidelines.

RESPECTFULLY SUBMITTED

Elaine Claiborne
Laboratory Director
04-Jun-10

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** KING GEORGE COUNTY SERVICE AUTHORITY

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Yes ☐ No ☒

3. **Provide the tax map parcel number for the land where the discharge is located.** 31 – 1A

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** **0.0**

5. **What is the design average effluent flow of this facility?** **0.375** MGD
   For industrial facilities, provide the max. 30-day average production level, include units:

   In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☒ No ☐
   If "Yes", please identify the other flow tiers (in MGD) or production levels:
   0.5 MGD

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**

   ---

   100 % of flow from domestic connections/sources

   Number of private residences to be served by the treatment works: **334**

   ____ % of flow from non-domestic connections/sources

7. **Mode of discharge:** ☐ Continuous ☒ Intermittent ☐ Seasonal
   Describe frequency and duration of intermittent or seasonal discharges:
   3- 4 per month 8 to 10 days apart. Average 39 times per year. Average 0.0221 MG per discharge day

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**
   - X Permanent stream, never dry
   - ____ Intermittent stream, usually flowing, sometimes dry
   - ____ Ephemeral stream, wet-weather flow, often dry
   - ____ Effluent-dependent stream, usually or always dry without effluent flow
   - ____ Lake or pond at or below the discharge point
   - ____ Other: _____

9. **Approval Date(s):** [Revised O&M Manual submitted: October 7, 2008]
   O & M Manual JUNE 2011 **Sludge/Solids Management Plan** JANUARY 2005

   Have there been any changes in your operations or procedures since the above approval dates? Yes ☐ No ☒

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into four sections. Section A pertains to all applicants. The applicability of Sections B, C and D depends on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Does this facility generate sewage sludge? __X__ Yes _____ No

   Does this facility derive a material from sewage sludge? _____ Yes __X__ No

   If you answered "Yes" to either, complete Section B (Generation Of Sewage Sludge or Preparation Of A Material Derived From Sewage Sludge).

3. Does this facility apply sewage sludge to the land? _____ Yes __X__ No

   Is sewage sludge from this facility applied to the land? _____ Yes __X__ No

   If you answer "No" to all above, skip Section C.

   If you answered "Yes" to either, answer the following three questions:

   a. Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions? _____ Yes _____ No

   b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land? _____ Yes _____ No

   c. Is sewage sludge from this facility sent to another facility for treatment or blending? _____ Yes _____ No

   If you answered "No" to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered "Yes" to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? _____ Yes __X__ No

   If "Yes", complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. **Facility Information.**
   a. Facility name: HOPYARD FARMS WASTEWATER TREATMENT PLANT
   b. Contact person: Christopher F. Thomas P.E
      Title: General Manager
      Phone: (540) 775-2746
   c. Mailing address:
      Street or P.O. Box: 9207 Kings Highway
      City or Town: King George State: VA Zip: 22485
   d. Facility location:
      Street or Route #: State Road 607, south of the intersection of State Route 3 and 607
      County: King George
      City or Town: King George State: VA Zip: 22485
   e. Is this facility a Class I sludge management facility? _____ Yes __X__ No
   f. Facility design flow rate: 0.375 mgd
   g. Total population served: 334
   h. Indicate the type of facility:
      __X__ Publicly owned treatment works (POTW)
      _____ Privately owned treatment works
      _____ Federally owned treatment works
      _____ Blending or treatment operation
      _____ Surface disposal site
      _____ Other (describe):

2. **Applicant Information.** If the applicant is different from the above, provide the following:
   a. Applicant name: King George County Service Authority
   b. Mailing address:
      Street or P.O. Box: 9207 Kings Highway
      City or Town: King George State: VA Zip: 22485
   c. Contact person: Christopher F. Thomas
      Title: General Manager
      Phone: (540) 775-2746
   d. Is the applicant the owner or operator (or both) of this facility?
      __X__ owner __X__ operator
   e. Should correspondence regarding this permit be directed to the facility or the applicant?
      _____ facility __X__ applicant

3. **Permit Information.**
   a. Facility's VPDES permit number (if applicable): VA0089338
   b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:
VDH-RAHD-12	Sewage Handling Permit VA0086789

4. **Indian Country.** Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? _____ Yes __X__ No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility **See FIGURE 1**
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction. **– SEE ATTACHMENTS D**

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? **X** Yes _____ No

   If "Yes", provide the following for each contractor (attach additional pages if necessary).

   Name: **WASTE MANAGEMENT**

   Mailing address:

   Street or P.O. Box: **45 Utah Place**

   City or Town: **Falmouth** State: **VA** Zip: **22485**

   Phone: **(800) 969-2069**

   Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

   VIRGINIA Department of Environmental Quality Permit # for King George Landfill: 586

   If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old. **[SEE ATTACHMENT C – BELT PRESS CAKE REPORT OF ANALYSIS]**

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	< 0.005 mg/L	05/08/2010	7060	0.05 mg/L
Cadmium	0.0077 mg/L	05/08/2010	7130	0.10 mg/L
Chromium	< 0.001mg/L	05/08/2010	7190	0.50 mg/L
Copper				
Lead	< 0.005 mg/L	05/08/2010	7420	0.50 mg/L
Mercury	< 0.005 mg/L	05/08/2010	7471	0.02 mg/L
Molybdenum				
Nickel				
Selenium	< 0.005 mg/L	05/08/2010	7740	0.05 mg/L
Zinc				

9. **Certification.** Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

__X__ Section A (General Information)

__X__ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

_____ Section C (Land Application of Bulk Sewage Sludge)

_____ Section D (Surface Disposal)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and official title: Christopher F. Thomas, General Manager

Signature Christopher F. Thomas Date Signed November 15, 2011

Telephone number: (540) 775-2746

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. **Amount Generated On Site.** **(Note: sludge is combined at the Dahlgren wastewater treatment plant)**
Total dry metric tons per 365-day period generated at your facility: **8.4 (Hopyard Farms WWTP portion)** dry metric tons

2. **Amount Received from Off Site.** If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.

   a. Facility name: N/A

   b. Contact Person: N/A

   Title: N/A

   Phone: N/A

   c. Mailing address:

   Street or P.O. Box: N/A

   City or Town: N/A State: N/A Zip: N/A

   d. Facility location: N/A

   (not P.O. Box)

   e. Total dry metric tons per 365-day period received from this facility: N/A dry metric tons

   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

   N/A

3. **Treatment Provided at Your Facility.**

   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
   _____ Class A _____ Class B __X__ Neither or unknown

   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: Aerobic Digestion – Sludge is hauled to the Dahlgren wastewater treatment plant for further digestions and dewatering prior to disposal at the landfill

   c. Which vector attraction reduction option is met for the sewage sludge at your facility?
   _____ Option 1 (Minimum 38 percent reduction in volatile solids)
   _____ Option 2 (Anaerobic process, with bench-scale demonstration)
   _____ Option 3 (Aerobic process, with bench-scale demonstration)
   _____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
   _____ Option 5 (Aerobic processes plus raised temperature)
   _____ Option 6 (Raise pH to 12 and retain at 11.5)
   _____ Option 7 (75 percent solids with no unstabilized solids)
   _____ Option 8 (90 percent solids with unstabilized solids)
   __X__ None or unknown

   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: N/A

   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: N/A

4. **Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and**

One of Vector Attraction Reduction Options 1-8 (EQ Sludge).

(If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:
N/A_____ dry metric tons

b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?
_____ Yes _____ No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: N/A_____ dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name: **Dahlgren WWTP**

b. Facility contact: **Christopher F. Thomas P.E**

Title: **General Manager**

Phone: **(540)775-2746**

c. Mailing address:

Street or P.O. Box: **9207 Kings Highway**

City or Town: **King George** State: **VA** Zip: **22485**

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:
8.4 dry metric tons

e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
VA0026514	VPDES Municipal **Major**

f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility?
X Yes _____ No

Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?
_____ Class A _____ Class B **X** Neither or unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Aerobic Digestion

g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? _____ Yes **X** No

Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

X Option 1 (Minimum 38 percent reduction in volatile solids)

_____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge:

Sludge is aerobically digested at the 1.0 MGD Dahlgren WWTP in four digesters with a total volume of approximately 166,784 gallons. This digester volume provides more than 40 days retention time resulting in 40% to 50% volatile solids reduction at full design capacity. The Dahlgren WWTP is currently operating at 25% its design capacity.

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
_____ Yes __X___ No

If "Yes", describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

i. If you answered "Yes" to f, g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? _____ Yes __X___ No

If "Yes", provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? __X___ Yes _____ No. If "No", provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported: From the treatment site on Route #607, the truck will travel north/east on Route #3 onto Route #301 North. The truck route continues onto Route #206 and the treatment plant/discharge location is approximately 0.5 miles southeast of U.S. Route 30 I. Sludge is haul 1/month

To prevent nuisance to the populace along the hauling routes, the contractor will be required to haul during business hours of 7:30 AM - 5:00 PM, Monday through Friday.

7. Land Application of Bulk Sewage Sludge. N/A

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6. Complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:

N/A_____ dry metric tons

b. Do you identify all land application sites in Section C of this application? _____ Yes _____ No

If "No", submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? _____ Yes _____ No

If "Yes", describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal. N/A

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: N/A_____ dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
_____ Yes _____ No

If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: N/A_____

d. Contact person: N/A_____

Title: N/A_____

Phone: N/A_____

Contact is: _____ Site Owner _____ Site operator

e. Mailing address:

Street or P.O. Box: N/A_____

City or Town: N/A_____ State: N/A_____ Zip: N/A_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: N/A_____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:	Type of Permit:
N/A	N/A

9. Incineration. N/A

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: **N/A**_____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
_____ Yes _____ No

If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: **N/A**_____

d. Contact person: **N/A**_____

Title: **N/A**_____

Phone: **N/A**_____

Contact is: _____ Incinerator Owner _____ Incinerator Operator

e. Mailing address:

Street or P.O. Box: **N/A**_____

City or Town: **N/A**_____ State: N/A_____ Zip: **N/A**_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: **N/A**_____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

of sewage sludge at this incinerator:

Permit Number:	Type of Permit:
N/A	N/A

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: **King George County Landfill**

b. Contact person: **Jeff Jenkins**

Title: **Director of Sludge Waste**

Phone: **(540) 775-3123**

Contact is: __X__ Landfill Owner _____ Landfill Operator

c. Mailing address:

Street or P.O. Box: **10459 Courthouse Road, Suite 200**

City or Town: King George State: VA Zip: **22485**

d. Landfill location.

Street or Route #: **10376 Bullock Drive**

County: **King George**

City or Town: **King George** State: **VA** Zip: **22485**

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:

124 dry metric tons (1,184 wet (~20% solids) tons for the period Jan 2009 – Nov 2010 – WM records)

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number:	Type of Permit:
586	DEQ
5249	Waste Management Approval Code (King George Landfill)

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
__X__ Yes _____ No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? __X__ Yes _____ No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? __X__ Yes _____ No

Show the haul route (s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported: See Sludge Management Plan (MAP for route, sludge is transported Mon-Fri 6 a.m. – 6 p.m.)

Haul Route:

--- From Dahlgren WWTP take Rt. 206 to Rt. 301,
--- Turn left on to Rt. 301 South,
--- Turn right onto Rt. 205 at light,
--- Turn right onto Rt. 3 west at light,
--- Turn right onto Birchwood Creek Rd.

--- End at King George County Landfill.

SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE - N/A

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

- ***The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or***
- ***The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or***
- ***You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).***

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site.

a. Site name or number: N/A_____

b. Site location (Complete i and ii)

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

a. Are you the owner of this land application site? _____ Yes _____ No

b. If "No", provide the following information about the owner:

Name: _____

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

Phone: (_____) _____

3. Applier Information:

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?
_____ Yes _____ No

b. If "No", provide the following information for the person who applies the sewage sludge:

Name: _____

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

Phone: (_____) _____

c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:

Permit Number: Type of Permit:

_____ _____

_____ _____

4. Site Type. Identify the type of land application site from among the following:

_____ Agricultural land _____ Reclamation site _____ Forest

_____ Public contact site _____ Other (describe _____

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?
_____ Yes _____ No If "Yes", answer a and b.

a. Indicate which vector attraction reduction option is met:

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

_____

_____

6. Cumulative Loadings and Remaining Allotments.

(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? _____ Yes _____ No

If "No", sewage sludge subject to the CPLRs may not be applied to this site.

If "Yes", provide the following information:

Permitting authority: _____

Contact person: _____

Phone: (_____) _____

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? _____ Yes _____ No If "No", skip the rest of Question 6. If "Yes", answer questions c - e.

c. Site size, in hectares: _____ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name: _____

Facility contact: _____

Title: _____

Phone: (_____) _____

Mailing address.

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	Cumulative loading	Allotment remaining
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.

7. **Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

PCBs (mg/kg)	_____
pH (S. U.)	_____
Percent Solids (%)	_____
Ammonium Nitrogen (mg/kg)	_____
Nitrate Nitrogen (mg/kg)	_____
Total Kjeldahl Nitrogen (mg/kg)	_____
Total Phosphorus (mg/kg)	_____
Total Potassium (mg/kg)	_____
Alkalinity as $CaCO_3^*$ (mg/kg)	_____

* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

8. **Storage Requirements.**

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.

1) Water wells, abandoned or operating
2) Surface waters
3) Springs
4) Public water supply(s)
5) Sinkholes
6) Underground and/or surface mines
7) Mine pool (or other) surface water discharge points
8) Mining spoil piles and mine dumps
9) Quarry(s)
10) Sand and gravel pits
11) Gas and oil wells
12) Diversion ditch(s)
13) Agricultural drainage ditch(s)
14) Occupied dwellings, including industrial and commercial establishments
15) Landfills or dumps
16) Other unlined impoundments
17) Septic tanks and drainfields
18) Injection wells
19) Rock outcrops

b. A topographic map of sufficient detail to clearly show the following information:

1) Maximum and minimum percent slopes
2) Depressions on the site that may collect water
3) Drainageways that may attribute to rainfall run-on to or runoff from this site
4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding

c. Data and specifications for the storage facility lining material.

d. Plan and cross-sectional views of the storage facility.

e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. **Land Area Requirements.** Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings

(CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. **Landowner Agreement Forms.** Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

11. **Ground Water Monitoring.**

Are any ground water monitoring data available for this land application site? _____ Yes _____ No

If "Yes", submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. **Land Application Site Information.**

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

a. Provide a general location map for each county which clearly indicates the location of all the land application sites.

b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.

c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U.S. Fish and Wildlife Service
Virginia Field Office
P.O. Box 480
White Marsh, VA 23183
TEL: (804) 693-6694

Provide a copy of the notification letter with this application form.

d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

Item e - h are required for sites receiving frequent application of sewage sludge

e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the following parameters.

Soil Organic Matter (%) _____

Soil pH (std. units) _____

Cation Exchange Capacity (meq/100g) _____

Total Nitrogen (ppm) _____

Organic Nitrogen (ppm) _____

Ammonia Nitrogen (ppm) _____

Nitrate Nitrogen (ppm) _____

Available Phosphorus (ppm) _____

Exchangeable Potassium (mg/100g) _____

Exchangeable Sodium (mg/100g) _____

Exchangeable Calcium (mg/100g) _____

Exchangeable Magnesium (mg/100g) _____

Arsenic (ppm) _____

Cadmium (ppm) _____

Copper (ppm) _____

Lead (ppm) _____

Mercury (ppm) _____

Molybdenum (ppm) _____

Nickel (ppm) _____

Selenium (ppm) _____

Zinc (ppm) _____

Manganese (ppm) _____

Particle Size Analysis or USDA Textural Estimate (%) _____

g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.

h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

SEWAGE SLUDGE APPLICATION AGREEMENT - N/A

This sewage sludge application agreement is made on this date _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:	Permittee:
_____	_____
Signature	Signature
_____	_____
Mailing Address	Mailing Address

SECTION D. SURFACE DISPOSAL – N/A

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units.

a. Unit name or number: N/A_____

b. Unit location

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:

_____ dry metric tons.

e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:

_____ dry metric tons.

f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1×10^{-7} cm/sec?

_____ Yes _____ No If "Yes", describe the liner or attach a description.

_____

_____

g. Does the active sewage sludge unit have a leachate collection system? _____ Yes _____ No

If "Yes", describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:

_____

_____

_____

h. If you answered "No" to either f or g, answer the following:
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? _____ Yes _____ No If "Yes", provide the actual distance in meters: _____

i. Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons

Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)

Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? _____ Yes _____ No

If "Yes", provide the following information for each such facility, attach additional sheets as necessary.

a. Facility name: _____

b. Facility contact: _____

Title: _____

Phone: (_____) _____

c. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:

Permit Number: Type of Permit:

_____ _____

_____ _____

e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?
_____ Class A _____ Class B _____ Neither or unknown

f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge: _____

_____

_____

g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)

_____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None or unknown

h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge: _____

_____

_____

i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above: _____

_____

_____

3. Vector Attraction Reduction.

a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

_____ Option 11 (Covering active sewage sludge unit daily)

b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge: _____

_____

_____

4. Ground Water Monitoring.

a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? _____ Yes _____ No

If "Yes", provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these

data.

b. Has a ground water monitoring program been prepared for this active sewage sludge unit?
_____ Yes _____ No If "Yes", submit a copy of the ground water monitoring program with this application.

c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? _____ Yes _____ No

If "Yes", submit a copy of the certification with this application.

5. Site-Specific Limits.

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
_____ Yes _____ No If "Yes", submit information to support the request for site-specific pollutant limits with this application.

– ATTACHMENT C –

SLUDGE HANDLING

SLUDGE DISPOSAL PLAN

SLUDGE DISPOSAL ROUTES

SLUDGE DISPOSAL PLAN

FOR THE

HOPYARD WASTEWATER TREATMENT PLANT

The Hopyard Farms wastewater treatment plant is a Sequencing Batch Reactor plant which treats domestic wastewater from the Hopyard Farms subdivision. The Plant capacity is 375,000 gallons per day; it is comprised of a comminutor, two Sequencing Batch Reactor basins, a post-equalization basin, UV Disinfection units, and a post aeration basin. Sludge from the SBR basins is decanted to an aerobic digester for reduction of solids. Solids are removed from the aerobic digester and transported to the Dahlgren Wastewater Treatment Facility for dewatering.

Ultimately, solids are disposed at the King George County Landfill. The operator shall refer to the King George County Sludge Management Plan prepared by CH2M Hill and dated January 2005, in addition to this report, for information concerning sludge disposal for this facility.

AEROBIC DIGESTER

Volume Aeration:	112,596 Gallons capacity
Diffused air:	180 scfm (from 15 fine bubble diffusers to maintain dissolved oxygen)
Floating Mixer:	5 HP to enhance aeration

QUANTITY AND QUALITY OF SLUDGE

Based on a treatment scheme involving the Sequencing Batch Reactor process, the approximate volume of sludge to be wasted to the aerobic digester each day is 360 c.f., or about 2,700 gallons at full build-out. Assuming a 20-25% reduction of solids and a maximum decanting of the supernatant before sludge withdrawal, 60,750 gallons of sludge must be pumped each month.

The sludge will be municipal in nature.

SLUDGE REMOVAL

With a total sludge holding capacity of 112,596 gallons, the holding tank has a capacity of 41 days (or 55 days, if decanting is practiced). For routine scheduling purposes, the sludge is to be pumped from the tank monthly. Visual inspection by the operator will determine when pumping must be accomplished. The exact day of the sludge pumping will be noted in plant records for examination by the Virginia Department of Environmental Quality.

SLUDGE HAULING

Sludge pumping and hauling will be accomplished by the King George County Service Authority (KGCSA) or a reputable septic tank service company to be determined at the time of pumping.

It is explicitly understood that KGCSA will have final responsibility to insure the sludge is disposed of correctly.

The hauling contractor will haul the sludge in a non-spill watertight tank mounted on a truck normally used for such operations. He will haul it to the Dahlgren Wastewater Treatment Plant owned by KGCSA, where it will be dewatered and ultimately disposed of at the King George County Landfill.

TRANSPORTATION ROUTE AND TIMES

Routes used for hauling the sludge are as shown on the attached map and are briefly described below:

From the treatment site on Route #607, the truck will travel north/east on Route #3 onto Route #301 North. The truck route continues onto Route #206 and the treatment plant/discharge location is approximately 0.5 miles southeast of U.S. Route 30 I.

To prevent nuisance to the populace along the hauling routes, the contractor will be required to haul during business hours of 7:30 AM - 5:00 PM, Monday through Friday.

SLUDGE TREATMENT

The sludge hauler will be responsible for meeting all requirements placed on him by KGCSA; these requirements include:

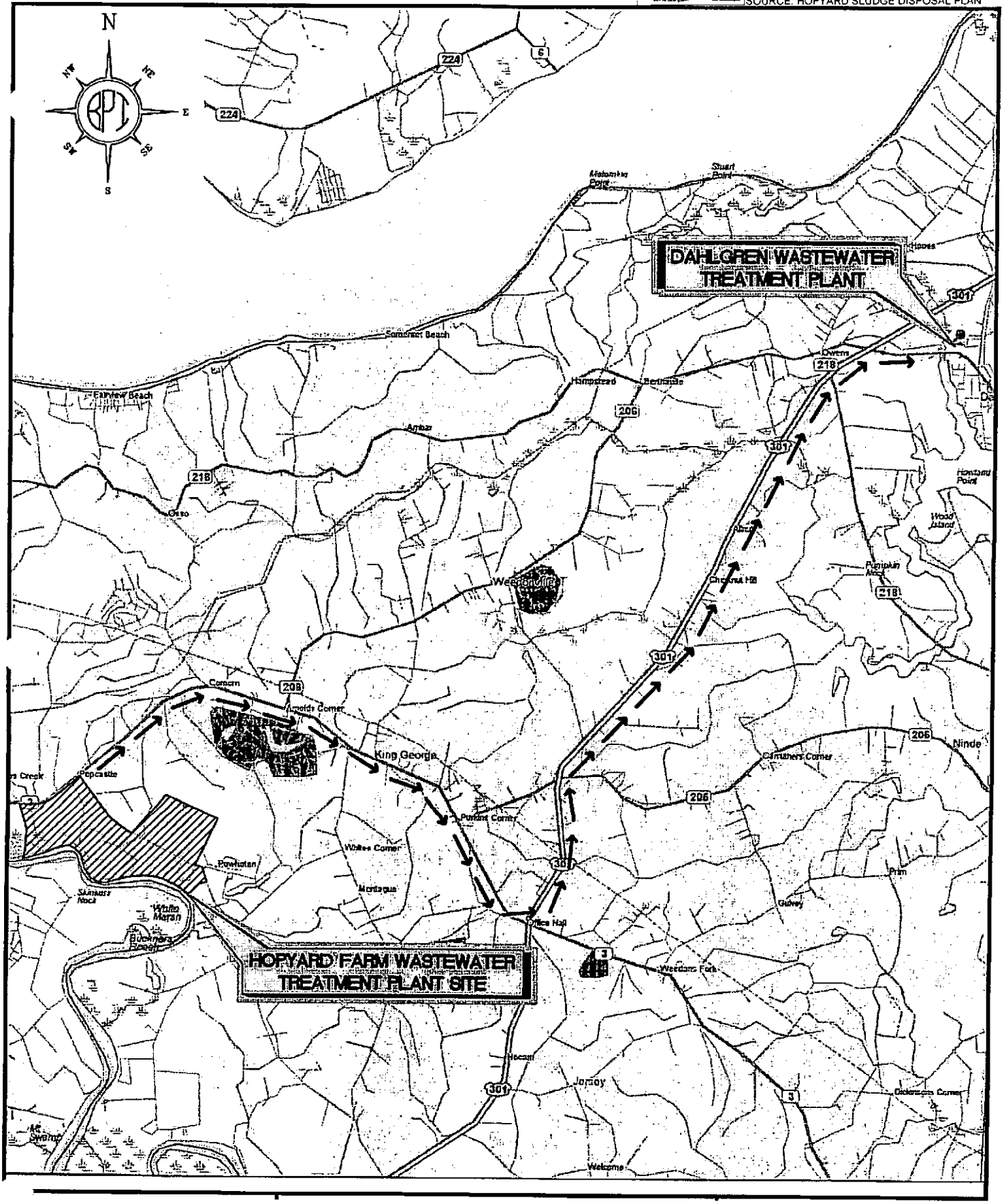
1) Checking and maintaining the proper pH (approximately 7.0) before dumping.
2) Cleanup of any spillage during delivery, or performance of any other cleanup operation as deemed necessary by the KGCSA due to the delivery of sludge.

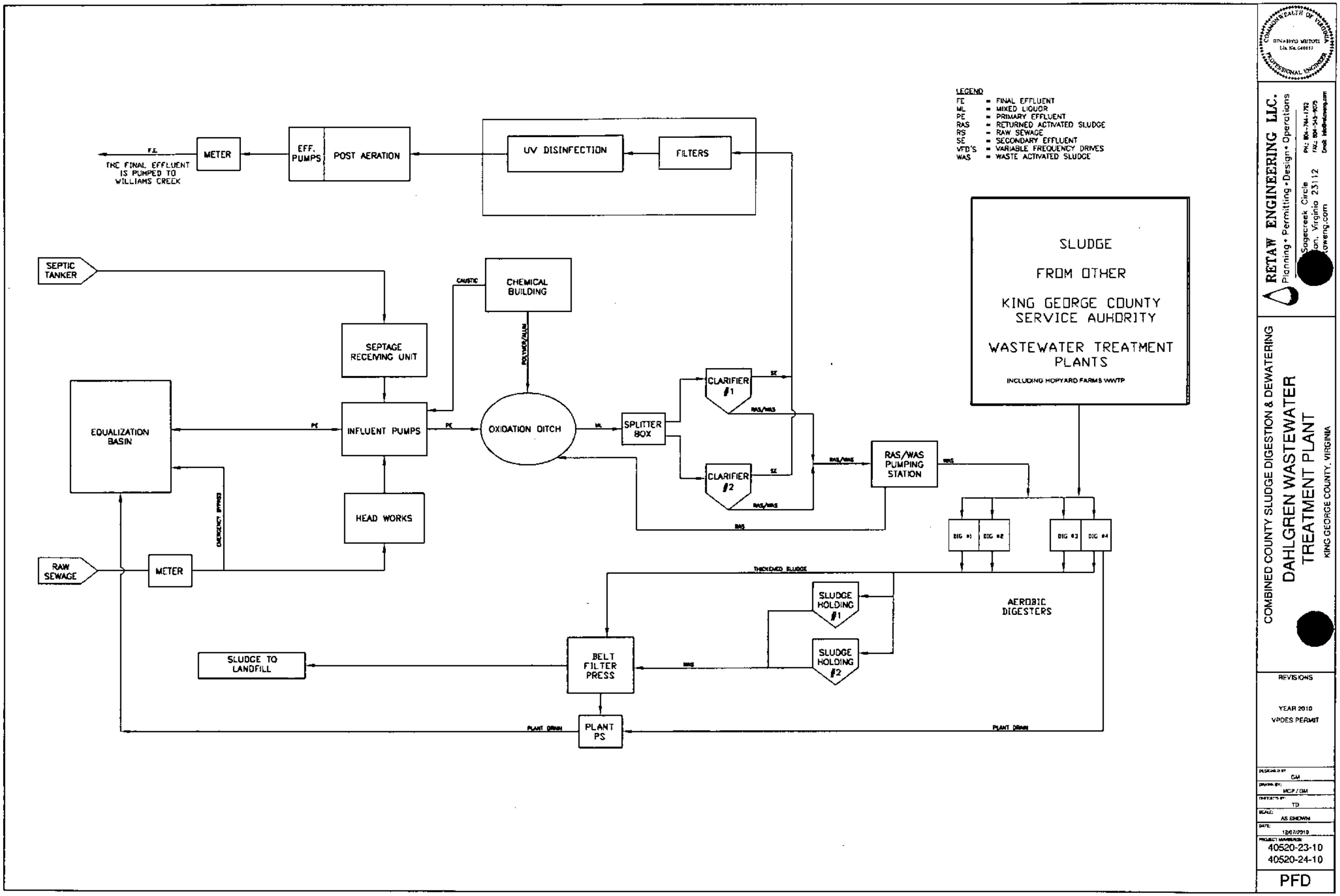
After delivery of the sludge, the KGCSA will be solely responsible for final disposal thereof. The hauling contractor will report the quality of sludge delivered, the time of day, and the exact method of disposal. In turn, KGCSA shall note this on the regular monthly operating report.

SLUDGE HAUL ROUTE: HOPYARD FARM WWTP TO DAHLGREN WWTP

BPI ENGINEERING LLC

PROJECT No.:40830-28-11
DATE: 10/21/2011
SOURCE: HOPYARD SLUDGE DISPOSAL PLAN





F.E.
THE FINAL EFFLUENT IS PUMPED TO WILLIAMS CREEK
METER
EFF. PUMPS
POST AERATION
UV DISINFECTION
FILTERS
LEGEND
FE = FINAL EFFLUENT
ML = MIXED LIQUOR
PE = PRIMARY EFFLUENT
RAS = RETURNED ACTIVATED SLUDGE
RS = RAW SEWAGE
SE = SECONDARY EFFLUENT
VFD'S = VARIABLE FREQUENCY DRIVES
WAS = WASTE ACTIVATED SLUDGE
SEPTIC TANKER
CAUSTIC
CHEMICAL BUILDING
POLYMER/ALUM
SEPTAGE RECEIVING UNIT
SLUDGE FROM OTHER KING GEORGE COUNTY SERVICE AUHORITY WASTEWATER TREATMENT PLANTS
INCLUDING HOPYARD FARMS WWTP
EQUALIZATION BASIN
PE
INFLUENT PUMPS
PE
OXIDATION DITCH
ML
SPLITTER BOX
CLARIFIER #1
SE
RAS/WAS
CLARIFIER #2
SE
RAS/WAS
RAS/WAS
RAS/WAS PUMPING STATION
WAS
RAS
EMERGENCY BYPASS
HEAD WORKS
DIG #1
DIG #2
DIG #3
DIG #4
RAW SEWAGE
METER
THICKENED SLUDGE
SLUDGE HOLDING #1
AERDBIC DIGESTERS
SLUDGE HOLDING #2
SLUDGE TO LANDFILL
BELT FILTER PRESS
WAS
PLANT DRAIN
PLANT PS
PLANT DRAIN
COMMONWEALTH OF VIRGINIA PROFESSIONAL ENGINEER
RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
Sagecreek Circle
Virginia 23112
COMBINED COUNTY SLUDGE DIGESTION & DEWATERING
DAHLGREN WASTEWATER TREATMENT PLANT
KING GEORGE COUNTY, VIRGINIA
REVISIONS
YEAR 2010
VPDES PERMIT
DESIGNED BY GM
DRAWN BY: MCP / GM
CHECKED BY: TD
SCALE: AS SHOWN
DATE: 12/07/2010
PROJECT NUMBERS: 40520-23-10 40520-24-10
PFD

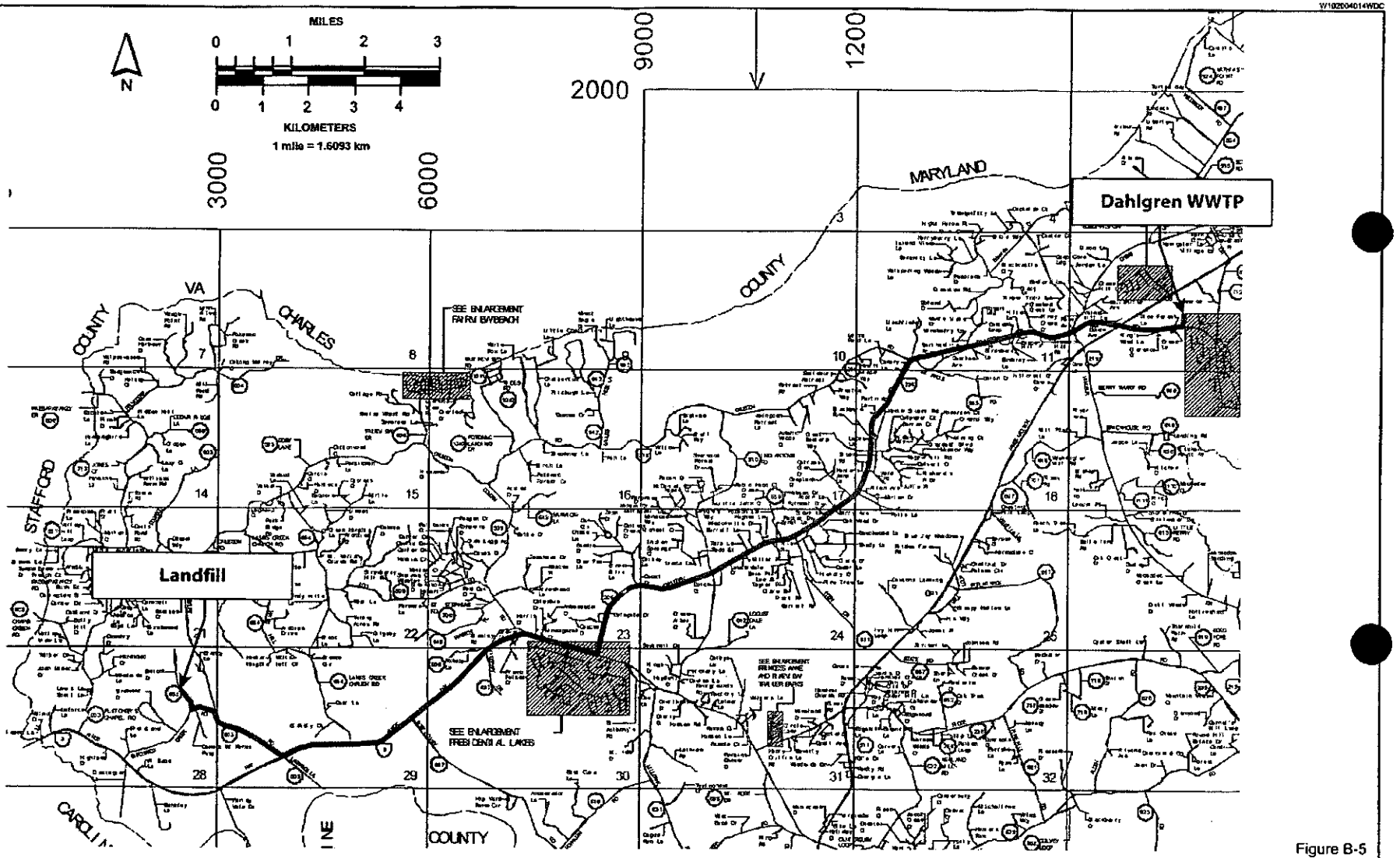


Figure B-5
Dalgren WWTP to USA Waste Landfill

CH2MHILL

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in *the Free Lance Star* in accordance with 9 VAC 25-31-290.C.2

Agent/Department to be billed:	King George County Service Authority
Owner:	King George County Service Authority
Agent/Department Address:	9207 Kings Highway
	King George, VA 22485
Agent's Telephone No.:	(540)775-2746
Printed Name:	Christopher F. Thomas, PE
Authorizing Agent – Signature:	
Date:	10. 21. 2011

VPDES Permit No.: VA0089338

Facility Name: HOPYARD FARMS WASTEWATER TREATMENT PLANT

Crowther, Joan (DEQ)

From: Ignatius Mutoti [ignatius.mutoti@retaweng.com]
Sent: Tuesday, December 06, 2011 11:50 AM
To: Crowther, Joan (DEQ)
Cc: 'Chris Thomas'; 'Jeff Hockaday'
Subject: Complete VPDES Application Package - Hopyard Farm WWTP
Attachments: HY VPDES App_2011_Final.pdf

Ms Joan Crowther
Please find a complete package with the update test results for Hopyard Farms WWTP attached. If you have any question or concerns, please contact me or Mr. Christopher Thomas at King George County Service Authority.

Thank you

Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

Reta Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, VA 23112
Phone:804.744.1792 | Cell:804.245.2979 | Fax:804.545.9075
Email: ignatius.mutoti@retaweng.com| Website: www.retaweng.com

Markets: Municipal | State | Federal | Industrial |Private Developer

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Services: Planning | Permitting | Bench-Scale & Pilot-Scale Studies | Designing |Construction Administration | Treatment Process Optimization & Tailored Operations Training | Guidance Manuals

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, Virginia 23112
Phone: (804) 744-1792 | **Cell**: (804) 245-2979 | **Fax**: (804) 545-9079
Website: http://www.retaweng.com | **Email**: Info@retaweng.com

November 15, 2011

Sent Via- Email

Ms Joan C. Crowther,
Permit Writer, Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Re: Application for VPDES Permit No. VA0089338, Hopyard Farms Waste Water Treatment Plant (WWTP)

Dear Ms. Joan Crowther
The application for the Hopyard Farm WWTP VPDES permit # VA0089338 was submitted on October 21, 2011 on behalf of King George Service Authority (KGCSA). We received a letter from your office dated November 1, 2011 stating that the application had been reviewed and appears to be complete except for seven items addressed below as follows:

1. **Permit Application Fee Form:** Please discard and disregard permit application fee form that was send with the original renewal application. The KGCSA did not send a check for permit application fee check to the Treasurer of Commonwealth of Virginia. Instead, the KGCSA pays an annual permit maintenance fee for the Hopyard Farm WWTP

2. **EPA Form 2A Section A9.b.** We have revised the longitude/latitude location of the discharge Outfall 001 to be N 38° 14' 39" / W -77° 13" 32". Additionally, we have included an area of the Hopyard WWTP service area from the County GIS data showing location and coordinates of the Outfall 001 and the Outfall plan and profile from the As-built drawings.

3. **EPA Form 2A Section A9.b.** The invert for Outfall 001 is located at 2.8 ft below the mean water surface level (see attached As-built drawing of the Outfall)

4. **EPA Form 2A Maximum daily flow rates A.6**: Flow figures have been revised to reflect the one-day maximum daily flow rate, in million gallons per day (mgd), that the plant received this year and each of the past two years (2009: 0.2838 MGD, 2010: 0.33786 MGD, 2011: 0.3125 MGD)and not the average maximum daily figures as previously stated.

5. **EPA Form 2A Section B.6 EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY).** Please replace page 8 of 21 with the update page which includes one (1) scan for Oil & Grease and Total Dissolved Solids and Specific Conductance. Two more test results will be provided (not specified date from the laboratory).

   Please replace EPA Form 2A Part C with the re-certified page

6. **Section A.8 of the VPDES Sewage Sludge Permit Application Form:** The DEQ granted a waiver for additional sludge cake testing on 11/08/11 since the sludge is disposed of in a landfill. However, the VPDES Sludge Permit Application has been update to change Parcel Tax Map information where Outfall 001 is located 31-1. Please replace the Sludge Application form and page 4 of 18 of the VPDES Sludge Application Addendum which has been re-certified.

7. Laboratory test results for parameters required per VPDES Permit Attachment A Test Results (1/5yr) testing and two addition test results for Oil and Grease and Total Dissolved Solids are still pending. The laboratories have not indicated when these results will be available. The results will be forward to you upon receipt.

Should you have any questions or need clarifications regarding this application, please feel free to contact me at (804) 245 2979 or Mr. Christopher F. Thomas, P.E., at the King George County Service Authority, (540) 775-8563.

Very Truly Yours,

Ignatius Mutoti, PhD, PE
Retaw Engineering

Crowther, Joan (DEQ)

From: Ignatius Mutoti [ignatius.mutoti@retaweng.com]
Sent: Tuesday, December 06, 2011 11:36 AM
To: Crowther, Joan (DEQ)
Cc: 'Chris Thomas'
Subject: RE: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application
Attachments: 4 EPA Form 2A_B6 Effluent Testing_rev3.pdf; Attachment A VPDES_ TBT.pdf

Ms Joan Crowther:
Attached please find the complete results for:

1. EPA Form 2A: part B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY)
   TDS, Conductivity, and Oil and Grease. Please replace page 8 of 21 in application package with attached page
2. Attachment A of the VPDES – Tributyltin (TBT). Please add after Attachment A results previously submitted.

With this information, all required test results and amendments are complete.

Thank you

Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

Retaweng Engineering
A GLOBAL WATER PRACTICE

Phone:804.744.1792 | Cell:804.245.2979 | Fax:804.545.9075
Email: ignatius.mutoti@retaweng.com| Website: www.retaweng.com

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Services: Planning | Permitting | Bench-Scale & Pilot-Scale Studies | Designing |Construction Administration | Treatment Process Optimization & Tailored Operations Training | Guidance Manuals

Markets: Municipal | State | Federal | Industrial |Private Developer

From: Crowther, Joan (DEQ) [mailto:Joan.Crowther@deq.virginia.gov]
Sent: Thursday, November 17, 2011 10:14 AM
To: Ignatius Mutoti
Cc: Chris Thomas
Subject: RE: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application

Hi Ignatius,

Wanted to let you know I got your emails this morning.

Joan

Joan C. Crowther
VPDES Permit Writer

Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3925 Fax number (703) 583-3821

Email address: joan.crowther@deq.virginia.gov

From: Ignatius Mutoti [mailto:ignatius.mutoti@retaweng.com]
Sent: Thursday, November 17, 2011 9:47 AM
To: Crowther, Joan (DEQ)
Cc: 'Chris Thomas'
Subject: RE: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application

Ms Joan
Here is the revised complete VPDES application package as a single document for the Hopyard Farm WWTP per my previous email.

Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

Reta...
Engineering
A GLOBAL WATER PRACTICE

Phone:804.744.1792 | Cell:804.245.2979 | Fax:804.545.9075
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Markets: Municipal | State | Federal | Industrial |Private Developer

From: Crowther, Joan (DEQ) [mailto:Joan.Crowther@deq.virginia.gov]
Sent: Tuesday, November 01, 2011 4:58 PM
To: Chris Thomas; Ignatius Mutoti
Subject: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application

Hi Chris and Ignatius,

Please find attached my letter dated November 1, 2011. Please let me know if you have any questions.

Thanks,

Joan

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality

Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
(703) 583-3925 Fax number (703) 583-3821

Email address: joan.crowther@deq.virginia.gov

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

_____

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	___/___/_____	___/___/_____
– End construction	___/___/_____	___/___/_____
– Begin discharge	___/___/_____	___/___/_____
– Attain operational level	___/___/_____	___/___/_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: _____

_____

B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	2.0	mg/L	0.15	mg/L	105	4500 -NH3 F	0.1
CHLORINE (TOTAL RESIDUAL, TRC)	NotRequired						
DISSOLVED OXYGEN	13.6	mg/L	8.8	mg/L	105	4500-G	0.1
TOTAL KJELDAHL NITROGEN (TKN)	25.3	mg/L	3.3	mg/L	105	351.4	0.1
NITRATE PLUS NITRITE NITROGEN	65.3	mg/L	15.3	mg/L	105	300.0/4500-NO2-	B 0.1 & 0.01
OIL and GREASE *	6.3	mg/L	6.1	mg/L	3	5520	5
PHOSPHORUS (Total)	3.89	mg/L	0.95	mg/L	105	365.2	0.01
TOTAL DISSOLVED SOLIDS (TDS) *	448	mg/L	445	mg/L	3	2540 C	1
OTHER Specific Conductance	700	umho/cm	669	umho/cm	3	2510 B	1

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

*TEST RESULTTS FOR OIL and GREASE and TOTAL DISSOLVED SOLIS (TDS)

SCANS 2 AND 3 ARE PENDING

SEE Attachment A - LABORATORY TEST RESULTS - 1/5YR

Cleaning wastewater every day for a better Bay.

1432 Air Rail Avenue, Virginia Beach, VA 23455-3002 ◦ 757.460.4205 ◦ Fax: 757.460.6586 ◦ www.hrsd.com

11/01/11 - County of King George - Hopyard Farm WWTP - Permit Application - Subcontracted Data

This subcontracted TBT data report contains 9 pages including the cover sheet.
The report should be attached to CEL data report sent 11/23/11.

Jeff Hockaday
Manager of Wastewater Operations
10459 Courthouse Drive - Suite 201
King George, VA 22485

jhockaday@co.kinggeorge.state.va.us

Date Sent: 12/05/11

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: October 11, 2011
Expiration Date: June 14, 2012
Certificate # 1248

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

DAT Reports®

Data Analysis Technologies,
7715 Corporate Blvd.
Plain City, OH 43064
800-733-8644

Sample Analysis Certificate

Client:	Hampton Road Sanitation District	Date:	12/1/2011
Address:	1440 Air Rail Avenue	DAT Project ID:	1111011
	Virginia Beach, VA 23455	Date Received:	11/10/2011
		Date Analyzed:	11/30/2011

Attn: Kathy Hobson
Client Project: KG-HOP
Analysis: TBT

The following samples were received on 11/10/2011:

DAT Sample ID	Client Sample ID	Date Sampled	Matrix
1111011-01	KG-HOP FNE	11/10/2011	Liquid

Results: See attached summary.

QC: Met the criteria for the method.

Reviewed and approved for release by: _____ Date: 12/1/2011

Ronald K. Mitchum, Ph.D.
President, DAT

DAT Reports®

Data Analysis Technologies, Inc.
7715 Corporate Boulevard
Plain City, OH 43064

Data Summary Table

NOAA 1993-TBT

Client:	Hampton Road Sanitation District	Date:	12/1/2011
Address:	1440 Air Rail Avenue	DAT Project ID:	1111011
	Virginia Beach, VA 23455	Date Received:	11/10/2011
Date Analyzed:	11/30/2011		

Analyst: SM

Analyzed: 11/30/2011

Client Sample ID:	DAT Sample ID:	Analyte:	*Sample MDL, ug/L*	TBT, ug/L	Q
KG-HOP	1111011- 1	Tributyltin	*0.03*	ND	

TBT=Tributyltin
ND=Not detected above the detection limit.
B = Method blank contained a trace level of the compound of interest.
D = Value measured from a dilution.
J = Value less than the low standard.

Crowther, Joan (DEQ)

From: Ignatius Mutoti [ignatius.mutoti@retaweng.com]
Sent: Wednesday, November 23, 2011 12:20 PM
To: Crowther, Joan (DEQ)
Cc: 'Chris Thomas'
Subject: RE: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application
Attachments: Appendix A _ Partial.pdf

Ms Joan
Please find test results for Attachment A parameters for the Hopyard Farm WWTP VPDES permit application. Please note, test result for TBT and one additional Oil and Grease and TDS are still pending and will be forwarded to your office upon receipt.

Have a very HAPPY THANKSGIVING Holiday!

Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

Retaweng Engineering
A GLOBAL WATER PRACTICE

Phone:804.744.1792 | Cell:804.245.2979 | Fax:804.545.9075
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Markets: Municipal | State | Federal | Industrial |Private Developer

From: Crowther, Joan (DEQ) [mailto:Joan.Crowther@deq.virginia.gov]
Sent: Thursday, November 17, 2011 10:14 AM
To: Ignatius Mutoti
Cc: Chris Thomas
Subject: RE: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application

Hi Ignatius,

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Joan

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
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Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

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Markets: Municipal | State | Federal | Industrial |Private Developer

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Subject: Hopyard Farms WWTP, VPDES Permit No. VA0089338 Application

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Thanks,

Joan

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
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1432 Air Rail Avenue, Virginia Beach, VA 23455-3002 ◦ 757.460.4205 ◦ Fax: 757.460.6586 ◦ www.hrsd.com

11/01/11 - County of King George - Hopyard Farm WWTP - Permit Application

This analytical report contains 10 pages. The subcontracted TBT data will be forwarded under separate cover when it is received.

Jeff Hockaday
Manager of Wastewater Operations
10459 Courthouse Drive - Suite 201
King George, VA 22485

jhockaday@co.kinggeorge.state.va.us

Date Sent: 11/22/11

HRSD CEL, Central Environmental Laboratory is VELAP/NELAC accredited by DCLS, the Division of Consolidated Laboratory Services.

VA Laboratory ID#: 460011
Effective Date: October 11, 2011
Expiration Date: June 14, 2012
Certificate # 1248

Analytical test results meet all requirements of VELAP/NELAC unless otherwise noted under the analysis.

Test results relate only to the sample tested. Clients should be aware that a critical step in chemical or microbiological analysis is the collection of the sample.

If you have any questions concerning this report, please do not hesitate to contact
Danny Barker, TSD Environmental Scientist at (757) 460-4247
dbarker@hrsd.com
Robin Parnell, CEL Laboratory Manager at (757) 460-4203.
rparnell@hrsd.com
Cindi Reno, CEL Administrative Assistant at (757) 460-4205.
creno@hrsd.com

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Field Blank
Project Code: KG_HOP
Sample Point: FB
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Total Metals							
Chromium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:52
Selenium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:52
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19
Arsenic	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19
Cadmium	EPA 200.8	ug/L	<2.0	2.0	CBATO	11/14/11	11:19
Chromium III (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:52
Chromium VI (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:52
Copper	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	11:19
Lead	EPA 200.8	ug/L	<30	30	CBATO	11/14/11	11:19
Mercury	EPA 245.1	ug/L	<0.2	0.2	SLABOC	11/15/11	13:20
Nickel	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	11:19
Silver	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	13:24
Zinc	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:19

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

Authorization: _____
Lab Manager / QA Manager

Date: 11/23/11

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Miscellaneous Parameters							
Free Cyanide[Δ]	ASTM D 4282	ug/L	<10	10	RMORGA	11/02/11	06:15
Chloride	SM 4500-Cl-B	mg	52	5	JGETTI	11/17/11	07:34
Sulfide (Hydrogen sulfide)	ASTM D 4658-03	mg/L	<0.1	0.1	RMORGA	11/07/11	07:30
Hardness (as $CaCO_3$)	SM2340B	mg eq $CaCO_3$/L	37.0	0.20	SWILLI	11/10/11	07:18
Total Metals							
Chromium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:59
Selenium	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	10:59
Dissolved Metals							
Antimony	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:41
Arsenic	EPA 200.8	ug/L	<20	20	CBATO	11/14/11	11:41
Cadmium	EPA 200.8	ug/L	<2.0	2.0	CBATO	11/14/11	11:41
Chromium III (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:59
Chromium VI (measured as Total Chromium)		ug/L	<10	10	CBATO	11/14/11	10:59
Copper	EPA 200.8	ug/L	<10	10	CBATO	11/14/11	11:41
Lead	EPA 200.8	ug/L	<30	30	CBATO	11/14/11	11:41
Mercury	EPA 245.1	ug/L	<0.2	0.2	SLABOC	11/15/11	13:23
Nickel	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	11:41
Silver	EPA 200.8	ug/L	<2	2	CBATO	11/14/11	13:30
Zinc	EPA 200.8	ug/L	42	20	CBATO	11/14/11	11:41

Notes:
[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*
[Δ] *Parameters is not included in the VELAP scope of accreditation.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Volatile Organics							
Acrolein	EPA 624	ug/L	<50.0	50.0	SLOPEZ	11/02/11	15:07
Acrylonitrile	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Benzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Bromoform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Carbon Tetrachloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chlorobenzene (Monochlorobenzene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chlorodibromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Chloroform	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Dichlorobromomethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,3 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,4 Dichlorobenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-Dichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-trans-Dichloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,2-Dichloropropane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,3 Dichloropropylene (1,3-Dichloropropene)[2]	EPA 624	ug/L	<20.0	20.0	SLOPEZ	11/02/11	20:04
Ethylbenzene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Methyl Bromide	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Methylene Chloride (Dichloromethane)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1,2,2-Tetrachloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Tetrachloroethylene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Toluene	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
1,1,2-Trichloroethane	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Trichloroethylene (Trichloroethene)	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Vinyl Chloride	EPA 624	ug/L	<10.0	10.0	SLOPEZ	11/02/11	20:04
Total Xylenes	EPA 624	ug/L	<30.0	30.0	SLOPEZ	11/02/11	20:04

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,3-Dichloropropylene is the total of cis-1,3-Dichloropropylene and trans-1,3-Dichloropropylene.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Semi-Volatile Organics-Acid Extractables							
2-Chlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4 Dichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4 Dimethylphenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
4,6-Dinitro-o-cresol (2-Methyl-4,6-dinitrophenol)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4-Dinitrophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Pentachlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Phenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4,6 Trichlorophenol	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Semi-Volatile Organics - Base Neutral Extractables							
Acenaphthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(a)anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(a)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(b)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Benzo(k)fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-(2-chloroethyl)-Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-(2-Chloroethoxy) Methane	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-2-(Chloroisopropyl) Ether	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Bis-2-ethyl hexyl phthalate (Di-2-Ethylhexyl Phthlate)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Butyl benzyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2-Chloronaphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Chrysene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dibenzo(a,h) anthracene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dibutyl phthalate (Di-n-butyl phthalate)	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01

Notes:
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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
3,3-Dichlorobenzidine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Diethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Dimethyl phthalate	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
2,4-Dinitrotoluene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
1,2-Diphenylhydrazine[2,Δ]	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Fluoranthene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Fluorene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorobutadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachlorocyclopentadiene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Hexachloroethane	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Indeno(1,2,3-cd)pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Isophorone	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Naphthalene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Nitrobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodi-n-propyl amine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodimethylamine	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
N-Nitrosodiphenylamine[3]	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
Pyrene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01
1,2,4 Trichlorobenzene	EPA 625	ug/L	<10.0	10.0	IGERAS	11/15/11	15:01

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[2] *1,2-Diphenylhydrazine gets converted to Azobenzene in the extraction process.*

[3] *N-Nitrosodiphenylamine decomposes in the injection port to Diphenylamine.*

[Δ] *Parameter is not included in VELAP scope of accreditation.*

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CENTRAL ENVIRONMENTAL LABORATORY
ANALYTICAL REPORT

Project: King George County - Hopyard Farm WWTP - Permit Application
Customer Sample ID: Final Effluent
Project Code: KG_HOP
Sample Point: FNE
Sample Date: 11/01/11

Analyte	Method	Unit	Result	Report Limit[1]	Analyst	Analysis Date	Analysis Time
Pesticides & PCB's							
Aldrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Chlordane	EPA 608	ug/L	ND	0.20	CCURRY	11/11/11	13:49
alpha-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
beta-BHC (Hexachlorocyclohexane)	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDD	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDE	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
DDT	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Dieldrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Alpha-Endosulfan	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Beta-Endosulfan	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endosulfan sulfate	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endrin	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Endrin aldehyde	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Heptachlor	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Heptachlor epoxide	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Kepone	EPA 8081B	ug/L	<0.06	0.06	CCURRY	11/09/11	19:58
Lindane	EPA 608	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Methoxychlor	EPA 8081B	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
Mirex	EPA 8081B	ug/L	<0.05	0.05	CCURRY	11/10/11	20:23
PCB 1016	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1221	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1232	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1242	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1248	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1254	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB 1260	EPA 608	ug/L	ND	1.00	CCURRY	11/11/11	13:49
PCB Total	EPA 608	ug/L	ND	7.00	CCURRY	11/11/11	13:49
Toxaphene	EPA 608	ug/L	ND	5.00	CCURRY	11/11/11	13:49
Organophosphorous Pesticides							
Demeton[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Guthion	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Malathion[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Chlorpyrifos (Dursban)	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15
Parathion[Δ]	EPA 622	ug/L	ND	0.10	CCURRY	11/18/11	11:15

Notes:

[1] *Report Limit is lowest concentration at which quantitation is demonstrated.*

[Δ] *Parameters are not included in HRSD CEL VELAP scope of accreditation.*

Authorization: _____ **Date:** 12311
Lab Manager / QA Manager

TBT

SUBCONTRACTED DATA

PENDING

Crowther, Joan (DEQ)

From: Ignatius Mutoti [ignatius.mutoti@retaweng.com]
Sent: Friday, October 21, 2011 2:30 PM
To: Crowther, Joan (DEQ)
Cc: 'Chris Thomas'
Subject: VPDES Permit Application - Hopyard Farms Wastewater Treatment Plant
Attachments: HY VPDES App_2011.pdf

Dear Ms Joan Crowther
On behalf of King George County Service Authority, I am please to submit the attached VPDES permit application package for the Hopyard Farms WWTP. As noted in our telephone conversation yesterday, samples for the 1/5 Year test parameter and Oil and Grease and TDS were collected and send to the lab for testing. Results are still pending. The results will be send to you immediately upon receipt.

Please do not hesitate to contact me should you have any questions or concerns regarding this permit application.

Very Truly Yours,

Ignatius Mutoti PhD, PE, Class II Operator
President & CEO

Retaweng Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, VA 23112
Phone:804.744.1792 | Cell:804.245.2979 | Fax:804.545.9075
Email: ignatius.mutoti@retaweng.com| Website: www.retaweng.com

Markets: Municipal | State | Federal | Industrial |Private Developer

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HOPYARD FARMS
WASTE WATER TREATMENT PLANT

VPDES PERMIT No. VA 0089338

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION - 2011

KING GEORGE COUNTY SERVICE AUTHORITY
9207 Kings Highway
King George, VA 22485
Phone: (540)775-2746
Fax: (540) 775-5560

Prepared and submitted by:

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, VA 23112
Phone: (804) 744-1792 / (804) 245 2979
Fax: (804) 545-9072
E-mail: info@retaweng.com

October 21, 2011

PUBLIC NOTICE BILLING INFORMATION

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in *the Free Lance Star* in accordance with 9 VAC 25-31-290.C.2

Agent/Department to be billed:	King George County Service Authority
Owner:	King George County Service Authority
Agent/Department Address:	9207 Kings Highway
	King George, VA 22485
Agent's Telephone No.:	(540)775-2746
Printed Name:	Christopher F. Thomas, PE
Authorizing Agent – Signature:	
Date:	10 · 21 · 2011

VPDES Permit No.: VA0089338

Facility Name: HOPYARD FARMS WASTEWATER TREATMENT PLANT

J. Crowther

HOPYARD FARMS
WASTE WATER TREATMENT PLANT

VPDES PERMIT No. VA 0089338

VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION - 2011

KING GEORGE COUNTY SERVICE AUTHORITY
9207 Kings Highway
King George, VA 22485
Phone: (540)775-2746
Fax: (540) 775-5560

Prepared and submitted by:

Retaw Engineering
A GLOBAL WATER PRACTICE

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Midlothian, VA 23112
Phone: (804) 744-1792 / (804) 245 2979
Fax: (804) 545-9072
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October 21, 2011

Retaw Engineering
A GLOBAL WATER PRACTICE

2903 Sagecreek Circle
Midlothian, Virginia 23112
Phone: (804) 744-1792 | **Cell**: (804) 245-2979 | **Fax**: (804) 545-9079
Website: http://www.retaweng.com | **Email**: Info@retaweng.com

October 21, 2011

Sent Via- Email

Ms Joan C. Crowther,
Permit Writer, Northern Regional Office
Virginia Department of Environmental Quality
13901 Crown Court
Woodbridge, VA 22193

Re: Application for VPDES Permit No. VA0089338, Hopyard Farms Waste Water Treatment Plant (WWTP)

Dear Ms. Crowther:
We are pleased to submit this VPDES permit application package for the Hopyard Farms WWTP on behalf of the King George Service Authority. This application is for the renewal of the existing two (2) tier VPDES permit (VA0089338): 0.375 MGD and 0.5 MGD which expires June 22, 2012. Per your letter dated August 1, 2011, the application must be submitting by October 25, 2011 or 180 days before the expiration date. A hard copy of this application has been mailed to you.

This application contains the following documents:

1.	Cover Letter		1
2.	Permit Fee Schedule		2
3.	EPA Form 1		2
	a. Topography Map & Vicinity Map	1	
4.	EPA Form 2A		22
5.	Vicinity & Topographic Map	1	
6.	Location of Wastewater Treatment Plant & Service Area	1	
7.	Description of existing facility		
	a. Process Flow Diagram and Chemical Use Narrative	1	
	b. Site Layout, Process Tanks and Yard Piping		1
	c. Hydraulic Profile		1
8.	Attachment A - VPDES Permit Attachment A (1/5Year) Effluent Rest Results		TBD
9.	Attachment B: Test results for Belt Filter Press Sludge Cake		4
10.	VPDES Permit Application Addendum		1
11.	Sludge Application Form		18
12.	Attachment C:		
	a. Description of Sludge generation and handling for the Hopyard Farms WWTP	2	
	b. Wet sludge hauling route from the Hopyard Farms WWTP to the Dahlgren WWTP		1
	c. Process Flow Diagram for sludge digestion and dewater at the Dahlgren WWTP	1	
	d. Dewatered sludge hauling route (Dahlgren WWTP to the King George landfill)	1	
13.	Completed Public Notice & Billing Authorization form		1

Samples have been collected for VPDES permit Attachment A parameters and for Oil and Grease and for Total Dissolved Solids. Test results will be forward to your office upon receipt from the HRSD laboratory.

Should you have any questions or need clarifications regarding this application, please feel free to contact me at (804) 245 2979 or Mr. Christopher F. Thomas, P.E., at the King George County Service Authority, (540) 775-8563.

Very Truly Yours,

Ignatius Mutoti, PhD, PE
Retaw Engineering

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
PERMIT APPLICATION FEE FORM
EFFECTIVE JANUARY 1, 2008

INSTRUCTIONS

Applicants for individual Virginia Pollutant Discharge Elimination System (VPDES), Virginia Pollution Abatement (VPA), Virginia Water Protection (VWP), Surface Water Withdrawal (SWW), and Ground Water Withdrawal (GWW) Permits are required to pay permit application fees, except farming operations engaged in production for market. Fees are also required for registration for coverage under General Permits except for the general permits for sewage treatment systems with discharges of 1,000 gallons per day (GPD) or less and for Corrective Action Plans for leaking underground storage tanks. Except for VWP permits, fees must be paid when applications for permit issuance, reissuance* or modification are submitted. Applicants for VWP permits will be notified by the DEQ of the fee due. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received. (* - the reissuance fee does not apply to VPDES and VPA permits - see the fee schedule included with this form for details.)

The permit fee schedule is included with this form. Fees for permit issuance or reissuance and for permit modification are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218

A copy of the form and a copy of your check or money order should accompany the permit application. You should retain a copy for your records. Please direct any questions regarding this form or fee payment to the DEQ Office to which you are submitting your application.

APPLICANT NAME: KING GEORGE COUNTY SERVICE AUTHORITY

ADDRESS: 9207 Kings Highway

King George

VA 22485

DAYTIME PHONE: (540) 775 - 2746
Area Code

IRS Employer Identification Number (EIN):
[*aka* Federal Tax Identification Number (FIN)] 54 - 0716449

FACILITY/ACTIVITY NAME: HOPYARD FARMS WASTEWATER TREATMENT PLANT

LOCATION: State Road 607, south side of the intersection if State Routes 3 and 607

TYPE OF PERMIT APPLIED FOR:
(from Fee Schedule - see back of form) Municipal Minor Greater Than 100,000 GPD

TYPE OF ACTION: ☐ New Issuance ☒ Reissuance ☐ Modification

AMOUNT OF FEE SUBMITTED (from Fee Schedule): $ 7500

EXISTING PERMIT NUMBER (if applicable): VA0089338

DEQ OFFICE TO WHICH APPLICATION SUBMITTED (check one)

☐ Abingdon/SWRO	☐ Harrisonburg/VRO	☒ Woodbridge/NVRO	☐ Lynchburg/BRRO-L
☐ Richmond/PRO	☐ Richmond/Headquarters	☐ Roanoke/BRRO-R	☐ Virginia Beach/TRO

FOR DEQ USE ONLY
Date: _____
DC #: _____

Original Form and Check - DEQ Receipts Control, Richmond
Copy of Form and Copy of Check - DEQ Regional Office or Permit Program Office

FEE SCHEDULES

A. VPDES and VPA Permits. Applications for issuance of new individual VPDES or VPA permits, and for permittee initiated major modifications that occur (and become effective) before the stated permit expiration date. (Flows listed are facility "design" flows. Land application rates listed are facility "design" rates.) [NOTE: VPDES and VPA permittees pay an Annual Permit Maintenance Fee (APMF) instead of a reapplication fee. The permittee is billed separately by DEQ for the APMF.]

TYPE OF PERMIT	ISSUANCE	MODIFICATION	LAND APP MOD*
VPDES Industrial Major	$24,000	$12,000	
VPDES Municipal Major	$21,300	$10,650	$1,000
VPDES Industrial Minor / No Standard Limits	$10,200	$5,150	
VPDES Industrial Minor / Standard Limits	$3,300	$3,300	
VPDES Industrial Stormwater	$7,200	$3,600	
VPDES Municipal Minor / Greater Than 100,000 GPD	$7,500	$3,750	$1,000
VPDES Municipal Minor / 10,001 GPD - 100,000 GPD	$6,000	$3,000	$1,000
VPDES Municipal Minor / 1,001 GPD - 10,000 GPD	$5,400	$2,700	$1,000
VPDES Municipal Minor / 1,000 GPD or Less	$2,000	$1,000	
VPDES Municipal Minor / 1,000 GPD or Less that includes authorization for land application or land disposal of sewage sludge	$5,000	$1,000	$1,000
VPA Industrial Wastewater Operation / Land Application of 10 or More Inches Per Year	$15,000	$7,500	
VPA Industrial Wastewater Operation / Land Application of Less Than 10 Inches Per Year	$10,500	$5,250	
VPA Industrial Sludge Operation	$7,500	$3,750	
VPA Municipal Wastewater Operation	$13,500	$6,750	
VPA Municipal Sludge Operation	$5,000	$1,000	
All other VPA operations not specified above	$750	$375	

* The fee for modification of a VPDES permit due to changes relating to authorization for land application or land disposal of sewage sludge shall be $1,000.

B. Virginia Water Protection (VWP) Permits. Applications for issuance of new individual, and reissuance or major modification of existing individual VWP permits. Only one permit application fee will be assessed per application; for a permit application involving more than one of the operations described below, the governing fee shall be based upon the primary purpose of the proposed activity. (Withdrawal amounts shown are maximum daily withdrawals.)

TYPE OF PERMIT	ISSUANCE/REISSUANCE	MODIFICATION
VWP Individual / Surface Water Impacts (Wetlands, Streams and/or Open Water)	$2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($60,000 maximum)	$1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($30,000 maximum)
VWP Individual/Minimum Instream Flow - Withdrawals equal to or greater than 3,000,000 gallons on any day	$25,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals between 2,000,000 and 2,999,999 gallons on any day	$20,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals between 1,000,000 and 1,999,999 gallons on any day	$15,000	$5,000
VWP Individual / Minimum Instream Flow - Withdrawals < 1,000,000 gallons on any day that do not otherwise qualify for a general VWP permit for water withdrawals	$10,000	$5,000
VWP Individual / Reservoir - Major	$35,000	$12,500
VWP Individual / Reservoir - Minor	$25,000	$12,500
VWP Individual/Nonmetallic Mineral Mining	$2,400 plus $220 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($7,500 maximum)	$1,200 plus $110 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 87,120 sq. ft. (two acres) ($3,750 maximum)

C. Surface Water Withdrawal (SWW) and Ground Water Withdrawal (GWW) Permits. Applications for issuance of new individual, and reissuance or major modification of existing individual SWW permits or GWW permits.

TYPE OF PERMIT	ISSUANCE/REISSUANCE	MODIFICATION
Surface Water Withdrawal	$12,000	$6,000
Ground Water Withdrawal / Initial Permit for an Existing Withdrawal Based Solely on Historic Withdrawals	$1,200	$600
Ground Water Withdrawal	$6,000	$3,000

D. Registration Statements (VPDES and VPA permits) or Applications (VWP permits) for General Permit Coverage.

1. Except as specified in 2, 3, and 4 below, the fee for registration for coverage under a general permit is $600.
2. General VPDES Permit for Domestic Sewage Discharges of Less Than or Equal to 1,000 GPD (VAG40) = $0.
   General VPDES Permit Regulation for Discharges From Petroleum Contaminated Sites (VAG83) = $0.
3. VWP General Permit:

TYPE OF PERMIT	ISSUANCE
VWP General / Less Than 4,356 sq. ft. (1/10 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$0
VWP General / 4,356 sq. ft. to 21,780 sq. ft. (1/10 acre to 1/2 acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$600
VWP General / 21,781 sq. ft. to 43,560 sq. ft. (greater than 1/2 acre to one acre) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$1,200
VWP General / 43,561 sq. ft. to 87,120 sq. ft. (greater than one acre to two acres) of Surface Water Impact (Wetlands, Streams and/or Open Water)	$1,200 plus $120 for each 4,356 sq. ft. (1/10 acre) (or portion thereof) of incremental impact over 43,560 sq. ft. (one acre) ($2,400 maximum)
VWP General / Minimum Instream Flow / Reservoir - Water withdrawals and/or pond construction	$2,400

4. General VPDES Permit for Industrial Activity Storm Water Discharges (VAR05) = $500.

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F VA0089338 D

LABEL ITEMS

I. EPA I.D. NUMBER
III. FACILITY NAME
V. FACILITY MAILING ADDRESS
VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)	X		X	B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: HOPYARD FARMS WASTEWATER TREATMENT PLANT

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 HOCKADAY, JEFF, WASTEWATER MANAGER	(540) 775-2746

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 9207 KINGS HIGHWAY

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 KING GEORGE	VA	22485

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 State 607-SOUTHSIDE of intersection of State Route 607&3

B. COUNTY NAME: King George

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 King George	VA	22485	

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
4952 (specify) Sewage Treatment Plant or Facility	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
King George County Service Authority	☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other," specify.)*		D. PHONE *(area code & no.)*
F = FEDERAL S = STATE P = PRIVATE	M = PUBLIC *(other than federal or state)* O = OTHER *(specify)*	M (specify)	A (540) 775-2746

E. STREET OR P.O. BOX

9207 Kings Highway

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
King George	VA	22485	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
N VA0089338	P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
U	VAN020056 (specify) VPDES General Permit for Total Nitrogen and Total Phosphorus Discharges and Watershed Trading in the Chesapeake Watershed, Virginia
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
R	(specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Wastewater Treatment Plant in King George County, Virginia.

The existing plant (Phase I) is design 0.375 MGD of domestic wastewater serving 898 residential lots, and 33 Acres of Commmercial property, a Library, Fire Station and Clubhouse.

Phase II expansion of the plant will increase the design capacity to 0.5 MGD.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Christopher F. Thomas PE, General Manager	Christopher F. Thomas	10/21/2011

COMMENTS FOR OFFICIAL USE ONLY

C

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

FORM 2A NPDES

NPDES FORM 2A APPLICATION OVERVIEW

APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1. Facility Information.

Facility name: Hopyard Farm Wastewater Treatment Plant

Mailing Address: 9207 Kings Highway
King George, VA 22485

Contact person: Jeff Hockaday

Title: Wastewater Manager

Telephone number: (540) 775-2746

Facility Address (not P.O. Box): State Road 607, south of the intersection of State Route 3 and 607, King George, VA 22485

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant name: King George County Service Authority

Mailing Address: 9207 Kings Highway
King George, VA 22485

Contact person: Christopher F. Thomas, PE

Title: General Manager

Telephone number: (540) 775-2746

Is the applicant the owner or operator (or both) of the treatment works?

✓ owner ✓ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

_____ facility ✓ applicant

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES	VA0089338	PSD	
UIC		Other	VAN020056 (VPDES Nutrient General Permit)
RCRA		Other	

A.4. Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
134 Residential Units	334	Force Main/Gravity	Municipal
Fire Station + Library	0	Force Main/Gravity	Municipal
110,000 sq.ft Commercial ,	0	Force Main/Gravity	Municipal
Total population served	334		

A.5. Indian Country.

a. Is the treatment works located in Indian Country?

____ Yes ✓ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

____ Yes ✓ No

A.6. Flow. Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate 0.375 mgd Phase I / Phase II: 0.5 mgd

	Two Years Ago	Last Year	This Year	
b. Annual average daily flow rate	0.0204	0.0175	0.0141	mgd
c. Maximum daily flow rate	0.0229	0.0281	0.0260	mgd

A.7. Collection System. Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

✓ Separate sanitary sewer	100 %
____ Combined storm and sanitary sewer	____ %

A.8. Discharges and Other Disposal Methods.

a. Does the treatment works discharge effluent to waters of the U.S.? ✓ Yes ____ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent	1
ii. Discharges of untreated or partially treated effluent	0
iii. Combined sewer overflow points	0
iv. Constructed emergency overflows (prior to the headworks)	0
v. Other ____	0

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? ____ Yes ✓ No

If yes, provide the following for each surface impoundment:

Location: ____

Annual average daily volume discharged to surface impoundment(s) ____ mgd

Is discharge ____ continuous or ____ intermittent?

c. Does the treatment works land-apply treated wastewater? ____ Yes ✓ No

If yes, provide the following for each land application site:

Location: ____

Number of acres: ____

Annual average daily volume applied to site: ____ Mgd

Is land application ____ continuous or ____ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? ____ Yes ✓ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide: N/A

Transporter name:

Mailing Address:

Contact person:

Title:

Telephone number:

For each treatment works that receives this discharge, provide the following: N/A

Name:

Mailing Address:

Contact person:

Title:

Telephone number:

If known, provide the NPDES permit number of the treatment works that receives this discharge.

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? _____ Yes ✓ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method:

Is disposal through this method _____ continuous or _____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a,** go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

A.9. Description of Outfall.

a. Outfall number: 001

b. Location:
- Popcastle (City or town, if applicable) — 22845 (Zip Code)
- King George (County) — VA (State)
- 38° 14' 0" N (Latitude) — 77° 13' 43.3' W (Longitude)

c. Distance from shore (if applicable): 100 ft.

d. Depth below surface (if applicable): 24 ft.

e. Average daily flow rate: 0.0221 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ✓ Yes ____ No (go to A.9.g.)

If yes, provide the following information:

Number of times per year discharge occurs: 39

Average duration of each discharge: 24 hours

Average flow per discharge: 0.2102 mgd

Months in which discharge occurs: All12 months of the year

g. Is outfall equipped with a diffuser? ____ Yes ✓ No

A.10. Description of Receiving Waters.

a. Name of receiving water: Rappahannock River

b. Name of watershed (if known): Rappahannock River

United States Soil Conservation Service 14-digit watershed code (if known): ____

c. Name of State Management/River Basin (if known): ____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): ____

d. Critical low flow of receiving stream (if applicable):
acute N/A cfs chronic N/A cfs

e. Total hardness of receiving stream at critical low flow (if applicable): N/A mg/l of $CaCO_3$

A.11. Description of Treatment.

a. What levels of treatment are provided? Check all that apply.

_____ Primary ✓ Secondary

_____ Advanced _____ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD_5 removal or Design $CBOD_5$ removal	85	%
Design SS removal	85	%
Design P removal	75	%
Design N removal	80	%
Other _____		%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

Ultraviolet Disinfection

If disinfection is by chlorination, is dechlorination used for this outfall? _____ Yes _____ No

d. Does the treatment plant have post aeration? ✓ Yes _____ No

A.12. Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	7.0	s.u.			
pH (Maximum)	9.0	s.u.			
Flow Rate	0.3376	mgd	0.0221	mgd	39
Temperature (Winter)	5.0	°C	9.2	°C	90
Temperature (Summer)	28	°C	25.9	°C	91

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
		Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.								
BIOCHEMICAL OXYGEN DEMAND (Report one)	BOD-5	28.0	mg/L	5.1	mg/L	105	5210 (B)	2
	CBOD-5							
FECAL COLIFORM E. Coli		179	cfu/100mL	8	# /100 mL	123	EPA 1600	1
TOTAL SUSPENDED SOLIDS (TSS)		29.3	ppm	7.5	ppm	105	2540 (D)	1

END OF PART A.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).

B.1. Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.

0 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

None required

B.2. Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.) SEE HOPYARD FARM WWTP VICINITY MAP (FIGURE 1)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

B.3. Process Flow Diagram or Schematic. Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g, chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

SEE HOPYARD FARMS WWTP PROCESS FLOW SHEET - (FIGURE 2 & ATTACHEMENT C -NARRATIVE)

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ____Yes ✓ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. Scheduled Improvements and Schedules of Implementation. Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

001

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____Yes ✓ No

c If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

_____

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

Implementation Stage	Schedule MM / DD / YYYY	Actual Completion MM / DD / YYYY
– Begin construction	___/___/_____	___/___/_____
– End construction	___/___/_____	___/___/_____
– Begin discharge	___/___/_____	___/___/_____
– Attain operational level	___/___/_____	___/___/_____

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ____Yes ____No

Describe briefly: _____

_____

B.6. EFFLUENT TESTING DATA (GREATER THAN O.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall Number: 001

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML / MDL
	Conc.	Units	Conc.	Units	Number of Samples		
CONVENTIONAL AND NONCONVENTIONAL COMPOUNDS.							
AMMONIA (as N)	2.0	mg/L	0.15	mg/L	105	4500 -NH3 F	0.1
CHLORINE (TOTAL RESIDUAL, TRC)	NotRequired						
DISSOLVED OXYGEN	13.6	mg/L	8.8	mg/L	105	4500-G	0.1
TOTAL KJELDAHL NITROGEN (TKN)	25.3	mg/L	3.3	mg/L	105	351.4	0.1
NITRATE PLUS NITRITE NITROGEN	65.3	mg/L	15.3	mg/L	105	300.0/4500-NO2- B	0.1 & 0.01
OIL and GREASE *	N/A	mg/L	N/A	mg/L		5520	5
PHOSPHORUS (Total)	3.89	mg/L	0.95	mg/L	105	365.2	0.01
TOTAL DISSOLVED SOLIDS (TDS) *	N/A	mg/L	N/A	mg/L		2540 C	1.0
OTHER SEE Attachment A - LABORATORY TEST RESULTS -					1/5YR		

END OF PART B.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

*TEST RESULTTS FOR OIL and GREASE and TOTAL DISSOLVED SOLIS (TDS) ARE PENING

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

FIGURE 1

VICINITY MAP - HOPYARD FARMs WWTP

Outline of Facility

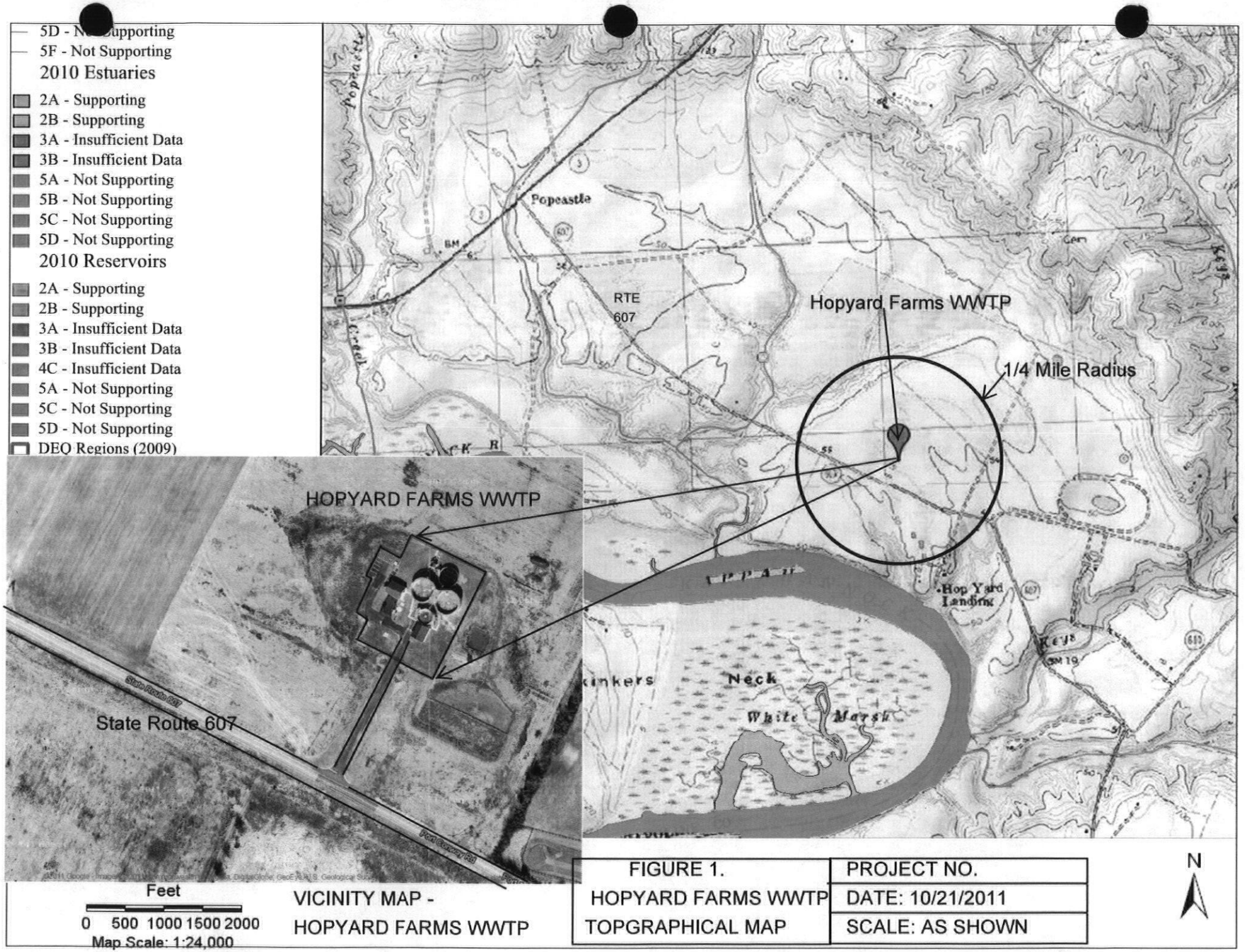
Area surrounding the treatment plant and all Unit processes

Major piping

Any Injection wells

Wells, Springs, and other Water bodies within a ¼ mile radius

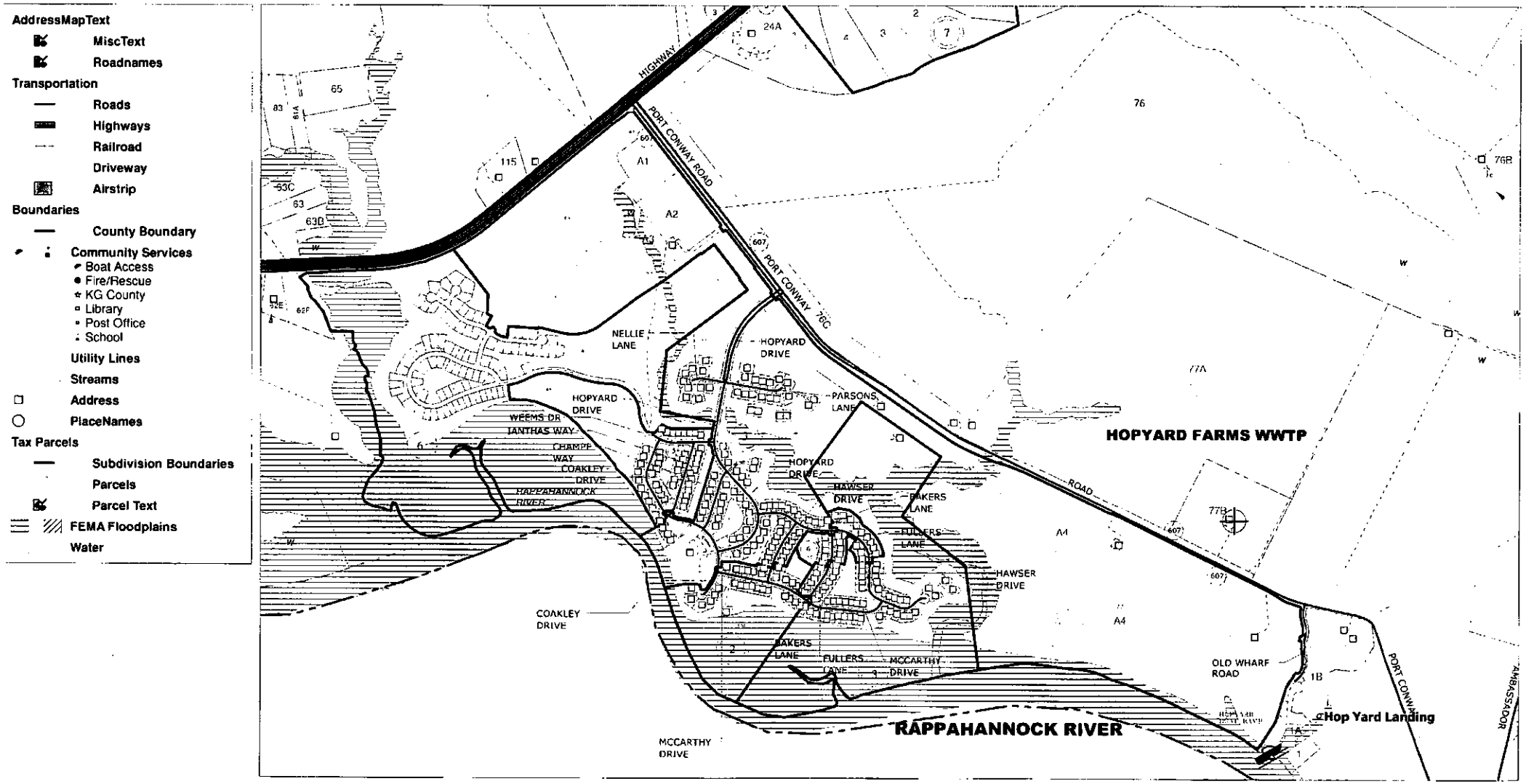
Page intentionally left blank



VICINITY MAP -
HOPYARD FARMS WWTP

FIGURE 1.	PROJECT NO.
HOPYARD FARMS WWTP	DATE: 10/21/2011
TOPGRAPHICAL MAP	SCALE: AS SHOWN

HOPYARD FARMS WWTP LOCATION & SERVICE AREA



SCALE 1 : 11,488

1,000 0 1,000 2,000 3,000
FEET

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
2903 Sagecreek Circle
Midlothian, Virginia 23112
www.retaweng.com
PH: 804-744-1797
FAX: 804-545-9075

HOPYARD FARMS WWTP AND SERVICE AREA
DWG: IGNATIUS MUTOTI, PHD, PE
DATE: 10/21/2011
SOURCE: COUNTY GIS
SCALE: AS SHOWN

N

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

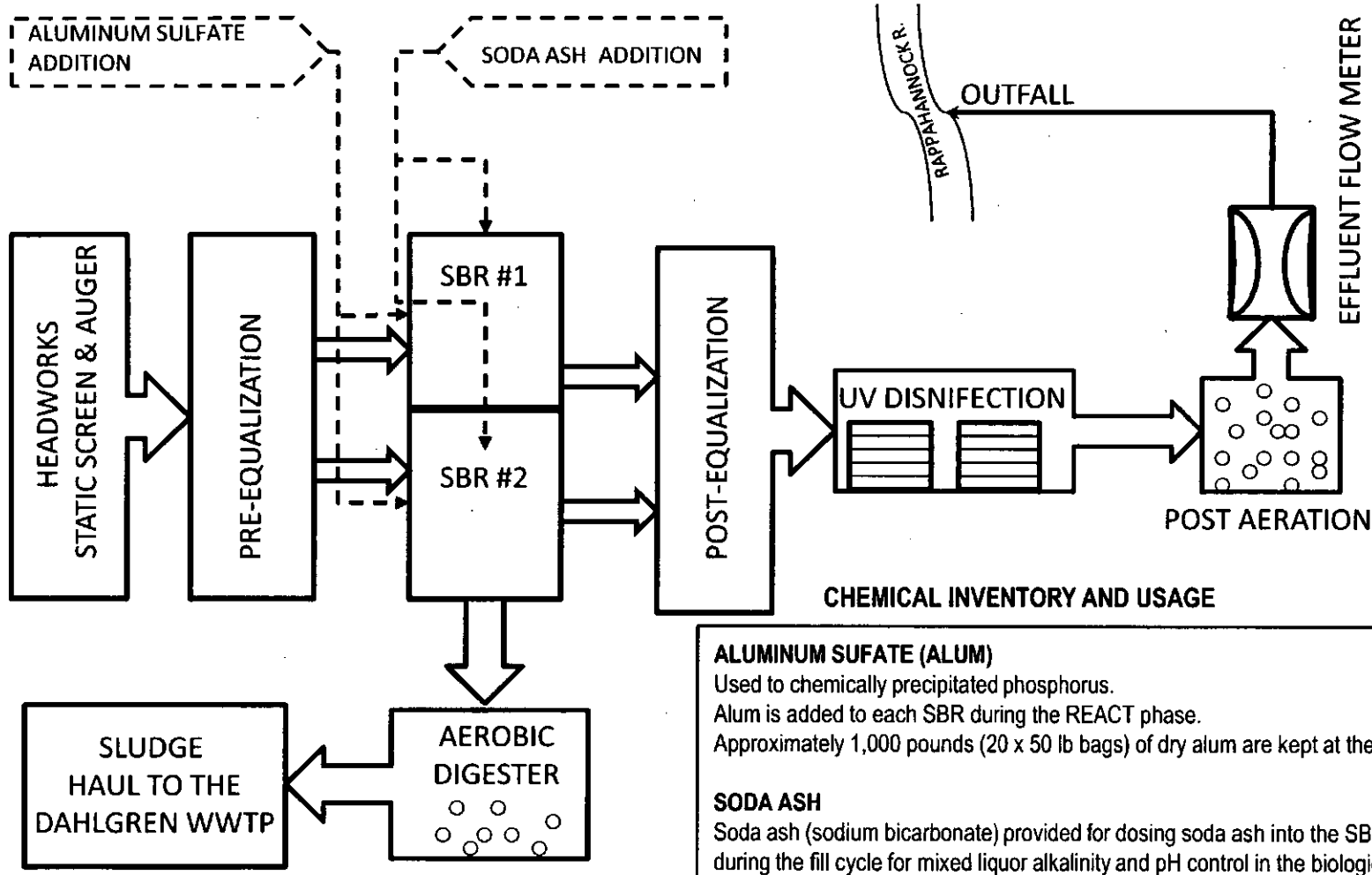
HOPYARD FARMS WASTEWATER TREATMENT PLANT

PROCESS FLOW SCHEMATICS

- **FIGURE 2: PROCESS LAYOUT & YARD PIPING**

- **FIGURE 3: HYDRAULIC PROFILE**

HOPYARD FARMS WWTP NARRATIVE



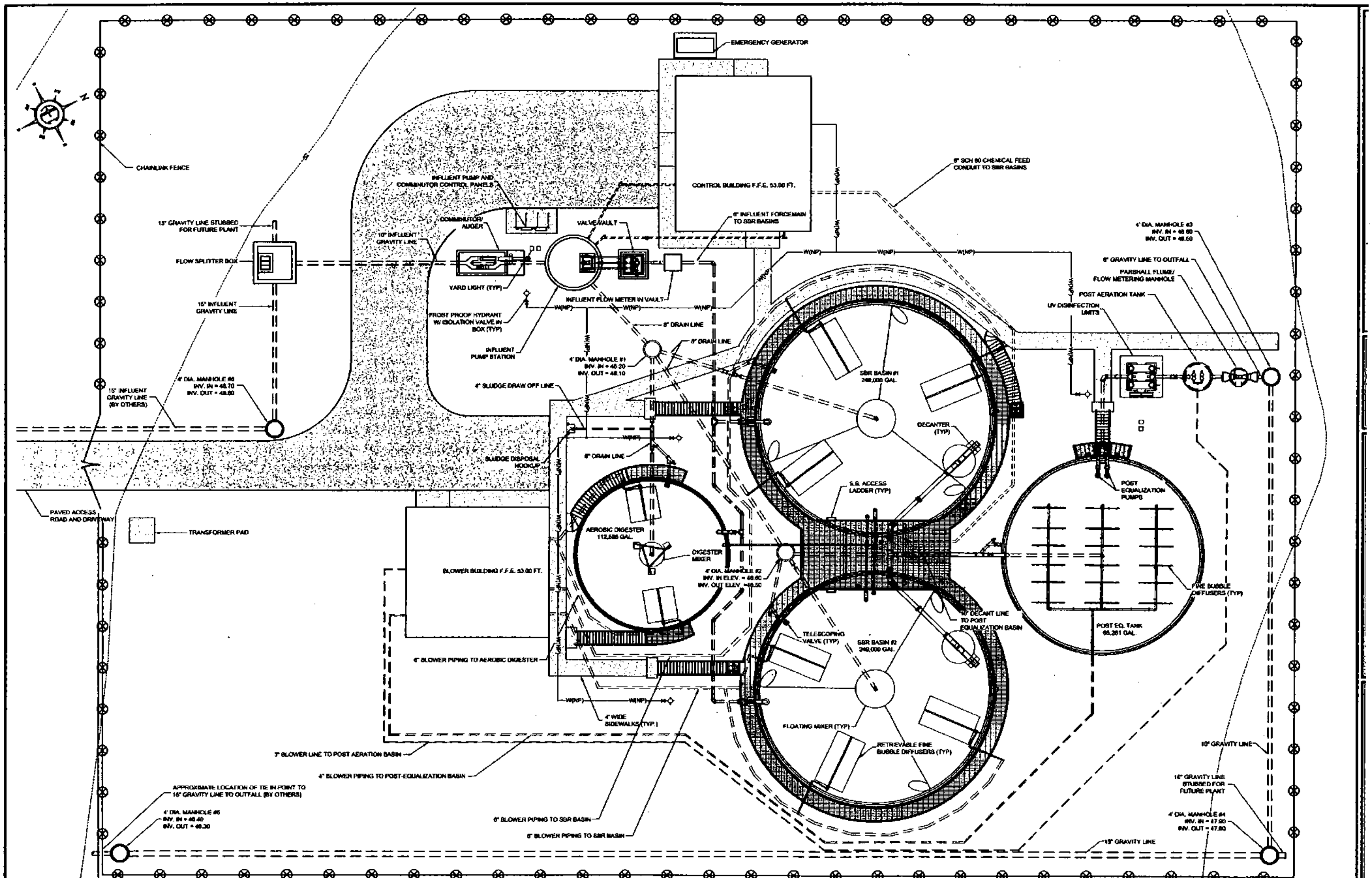
CHEMICAL INVENTORY AND USAGE

ALUMINUM SUFATE (ALUM)
Used to chemically precipitated phosphorus.
Alum is added to each SBR during the REACT phase.
Approximately 1,000 pounds (20 x 50 lb bags) of dry alum are kept at the Plant

SODA ASH
Soda ash (sodium bicarbonate) provided for dosing soda ash into the SBR basins during the fill cycle for mixed liquor alkalinity and pH control in the biological nitrification process, as needed.
Approximately 1,000 pounds (20 x 50 lb bags) of dry alum are kept at the Plant

RETAW ENGINEERING, LLC.
Planning • Permitting • Design • Operations
2933 Edgemeade Circle
Midlothian, Virginia 23112
www.retaweng.com

PROJECT NO.: 40828-30-11
DRAWN BY: IGNATIUS MUTOTI, PhD, PE
DATE: 10/21/2011 SCALE: NTS



OVERALL EQUIPMENT LAYOUT

(IN FEET)
1 inch = 10 ft.

NOTE:

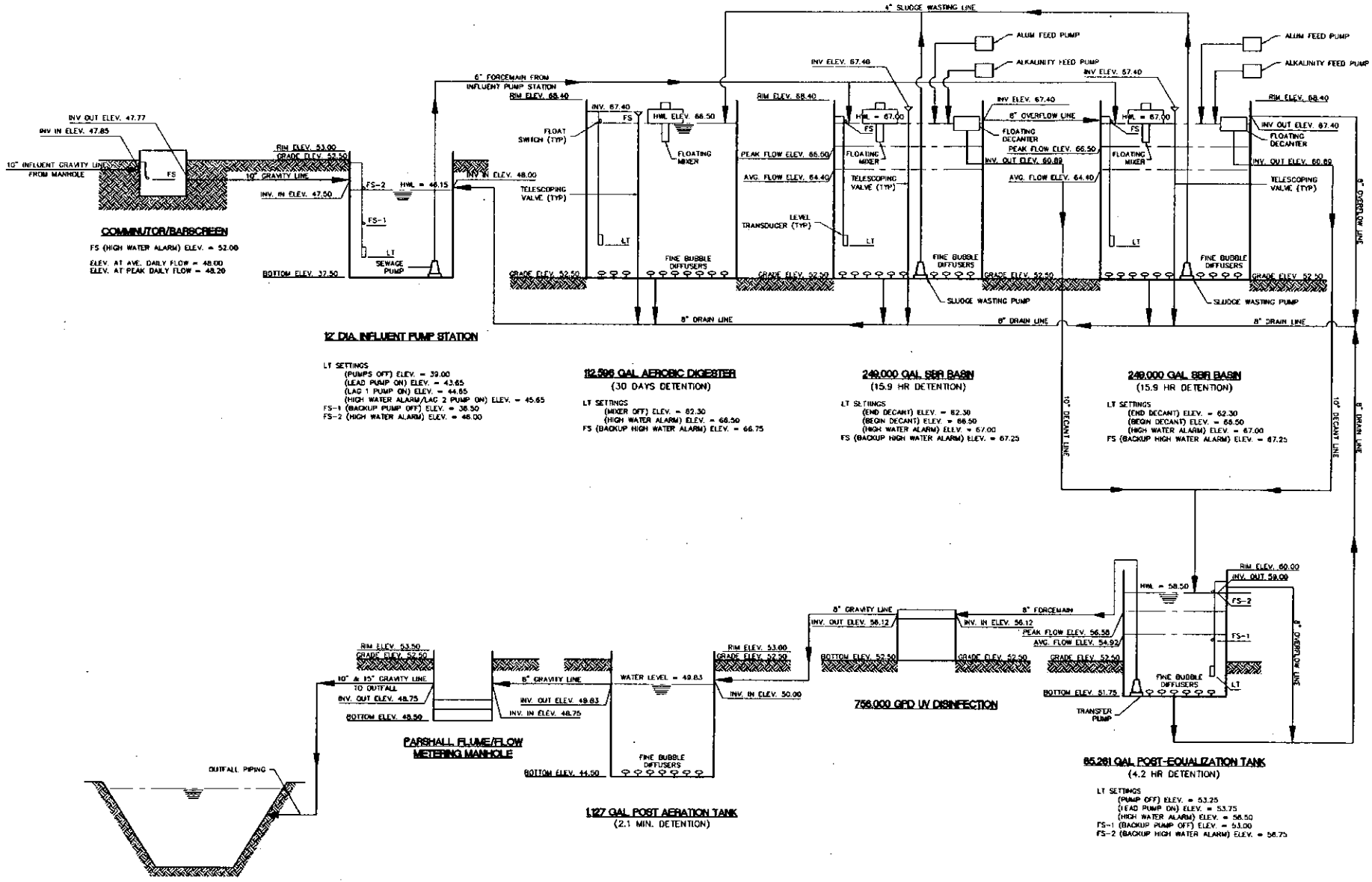
THE DESIGN OF THE 15" GRAVITY LINE TO THE WWTP SITE AND FROM THE WWTP SITE TO THE OUTFALL IS PROVIDED ON SEPARATE PLANS BY THE ENGINEERING GROUP, INC.

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations

HOPYARD FARMS WASTEWATER TREATMENT PLANT

SITE PLAN & YARD PIPING

PROJECT NO.: 40828-30-11
DWG SOURCE: RECORD DWGS 10/19/04
DATE: 10/21/2011
SCALE: AS SHOWN



HYDRAULIC PROFILE/PROCESS SCHEMATIC

NOT TO SCALE

RETAW ENGINEERING LLC.
Planning • Permitting • Design • Operations
2933 Sagecrest Circle
Midlothian, Virginia 23113

HOPYARD FARMS WWTP
HYDRAULIC PROFILE

PROJET NO.: 40828-30-11
DATE: 10/21/2011
SCALE: NTS
SOURCE: AS BUILT DWG 10/19/04

3 AVERAGE AND PEAK FLOW ELEVATIONS ADDED.

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

BASIC APPLICATION INFORMATION

PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

Indicate which parts of Form 2A you have completed and are submitting:

✓ Basic Application Information packet

Supplemental Application Information packet:

_____ Part D (Expanded Effluent Testing Data)

_____ Part E (Toxicity Testing: Biomonitoring Data)

_____ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

_____ Part G (Combined Sewer Systems)

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: Christopher F. Thomas PE, General Manager

Signature: Christopher F. Thomas

Telephone number: (540) 775-2746

Date signed: 10·21·2011

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

Joan C. Crowther
VPDES Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3925
Email address: joan.crowther@deq.virginia.gov

Form Approved 1/14/99
OMB Number 2040-0086

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA

N/A

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.											
ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (AS $CaCO_3$)											
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.											

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYLVINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLORETHYLENE											
VINYL CHLORIDE											
Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.											
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DICHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											
Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.											
BASE-NEUTRAL COMPOUNDS.											
ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPHTHALENE											
4-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ANTHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

FACILITY NAME AND PERMIT NUMBER:
Hopyard Farm Wastewater Treatment Plant, VA0089338

Form Approved 1/14/99
OMB Number 2040-0086

Outfall number: 001 (Complete once for each outfall discharging effluent to waters of the United States.) N/A

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/ MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI- METHYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											
Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.											
Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.											

END OF PART D.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SUPPLEMENTAL APPLICATION INFORMATION

PART E. TOXICITY TESTING DATA

N/A

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

____chronic ____acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	Test number:_____	Test number:_____	Test number:_____
a. Test information.			
Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			
b. Give toxicity test methods followed.			
Manual title			
Edition number and year of publication			
Page number(s)			
c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.			
24-Hour composite			
Grab			
d. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)			
Before disinfection			
After disinfection			
After dechlorination			

N/A	Test number:_____	Test number:_____	Test number:_____
e. Describe the point in the treatment process at which the sample was collected.			
Sample was collected:			
f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.			
Chronic toxicity			
Acute toxicity			
g. Provide the type of test performed.			
Static			
Static-renewal			
Flow-through			
h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.			
Laboratory water			
Receiving water			
i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.			
Fresh water			
Salt water			
j. Give the percentage effluent used for all concentrations in the test series.			
k. Parameters measured during the test. (State whether parameter meets test method specifications)			
pH			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			
l. Test Results.			
Acute:			
Percent survival in 100% effluent	%	%	%
LC_{50}			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

Chronic:	N/A		
NOEC	%	%	%
IC_{25}	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance.

Is reference toxicant data available?			
Was reference toxicant test within acceptable bounds?			
What date was reference toxicant test run (MM/DD/YYYY)?			
Other (describe)			

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____Yes____No If yes, describe: _____

_____

_____

E.4. Summary of Submitted Biomonitoring Test Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

_____

_____

END OF PART E.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

SUPPLEMENTAL APPLICATION INFORMATION

PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES N/A

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. **Pretreatment Program.** Does the treatment works have, or is it subject to, an approved pretreatment program?

____Yes____No

F.2. **Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs).** Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____

b. Number of CIUs. _____

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. **Significant Industrial User Information.** Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: _____

Mailing Address: _____

_____

F.4. **Industrial Processes.** Describe all of the industrial processes that affect or contribute to the SIU's discharge.

_____

F.5. **Principal Product(s) and Raw Material(s).** Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): _____

Raw material(s): _____

F.6. **Flow Rate.**

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____continuous or _____intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____continuous or _____intermittent)

F.7. **Pretreatment Standards.** Indicate whether the SIU is subject to the following:

a. Local limits ____Yes ____No

b. Categorical pretreatment standards ____Yes ____No

If subject to categorical pretreatment standards, which category and subcategory?

_____

N/A

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

____Yes____No If yes, describe each episode.

_____

_____

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe? ____Yes ___No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

_____Truck _____Rail _____Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number	Amount	Units

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

____Yes (complete F.13 through F.15.) ____No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

_____

_____

_____

F.14. Pollutants. List the hazardous constituents that are received (or are expected to be received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

_____

_____

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

____Yes ____No

If yes, describe the treatment (provide information about the removal efficiency):

_____

_____

b. Is the discharge (or will the discharge be) continuous or intermittent?

____Continuous ____Intermittent If intermittent, describe discharge schedule.

_____

END OF PART F.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

SUPPLEMENTAL APPLICATION INFORMATION

PART G. COMBINED SEWER SYSTEMS

N/A

If the treatment works has a combined sewer system, complete Part G.

G.1. System Map. Provide a map indicating the following: (may be included with Basic Application Information)

a. All CSO discharge points.

b. Sensitive use areas potentially affected by CSOs (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems, and outstanding natural resource waters).

c. Waters that support threatened and endangered species potentially affected by CSOs.

G.2. System Diagram. Provide a diagram, either in the map provided in G.1. or on a separate drawing, of the combined sewer collection system that includes the following information:

a. Locations of major sewer trunk lines, both combined and separate sanitary.

b. Locations of points where separate sanitary sewers feed into the combined sewer system.

c. Locations of in-line and off-line storage structures.

d. Locations of flow-regulating devices.

e. Locations of pump stations.

CSO OUTFALLS:

Complete questions G.3 through G.6 once for each CSO discharge point.

G.3. Description of Outfall.

a. Outfall number _____

b. Location

_____
(City or town, if applicable) (Zip Code)

_____
(County) (State)

_____
(Latitude) (Longitude)

c. Distance from shore (if applicable) _____ ft.

d. Depth below surface (if applicable) _____ ft.

e. Which of the following were monitored during the last year for this CSO?

____Rainfall ____CSO pollutant concentrations ____CSO frequency

____CSO flow volume ____Receiving water quality

f. How many storm events were monitored during the last year? _____

G.4. CSO Events.

a. Give the number of CSO events in the last year.

_____ events (___ actual or ___ approx.)

b. Give the average duration per CSO event.

_____ hours (____ actual or ____ approx.)

c. Give the average volume per CSO event.

N/A

_____ million gallons (_____ actual or _____ approx.)

d. Give the minimum rainfall that caused a CSO event in the last year.

_____ inches of rainfall

G.5. Description of Receiving Waters.

a. Name of receiving water: _____

b. Name of watershed/river/stream system: _____

United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin: _____

United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

G.6. CSO Operations.

Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shell fish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable State water quality standard).

_____

_____

END OF PART G.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE.

Additional information, if provided, will appear on the following pages.

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

– ATTACHMENT A –

LABORTARY TEST Results

1/5 Year per VPDES Permit Attachment A Schedule

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

ATTACHMENT A 1/5 YEAR EFFLUENT TEST RESULTS PENDING

(Upon receipt, insert laboratory test results here)

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

– ATTACHMENT B –

BELT PRESS CAKE REPORT OF ANALYSIS

(Next three pages)

REPORT OF ANALYSIS

CLIENT: King George County Service Authority
ATTN: Jeff Hockaday
ADDRESS: 10459 Courthouse Dr., Suite 201
CITY: King George, VA 22485
PHONE: (540) 775-2746
FAX: (540) 775-5560

SPECIAL NOTES:

SAMPLE RECEIPT
DATE: 5/18/10 TIME: 1050
GRAB COLLECTION
DATE: 5/18/10 TIME: 1515
COLLECTED BY: CLIENT
PICK UP BY: CLIENT
NUMBER OF CONTAINERS: 3
GOOD CONDITION ☑ Good ☐ Other (See C-O-C)

SAMPLE ID: BELT PRESS SLUDGE CAKE
SAMPLE NO 10-08076

Parameter	EPA HW No.	Method Number	JRA QL	Regulatory Level	Result	Unit	Analyst/Date/Time		
Aroclor 1016		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1221		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1232		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1242		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1248		8082B	0.08		< 0.08	mg/Kg	DLL	6/2/10	0521
Aroclor 1254		8082B	0.03		< 0.03	mg/Kg	DLL	6/2/10	0521
Aroclor 1260		8082B	0.03		< 0.03	mg/Kg	DLL	6/2/10	0521
pH		9045D			6.87@20oC	s.u.	JGM	5/20/10	1612
Paint Filter		9095B			No Free Liquid		JGM	5/28/10	1600
Flashpoint		1010			>100	oC	ARC	5/20/10	1315
Reactive Cyanide		9012B	0.124		< 0.124	mg/Kg	LEF	5/24/10	1058
Reactive Sulfide		9034	4.88		< 4.88	mg/Kg	EFA	5/26/10	1400
Toxic Characteristic Leaching Procedure by SW-846 Method 1311									
Arsenic	D004	6010C	0.005	5	< 0.005	mg/L	TLG	5/28/10	1244
Barium	D005	6010C	0.005	100	0.150	mg/L	TLG	5/28/10	1244
Benzene	D018	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
Cadmium	D006	6010C	0.0005	1	0.0077	mg/L	TLG	5/28/10	1244
Carbon Tetrachloride	D019	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
Chlordane	D020	8270D	0.025	0.03	< 0.025	mg/L	CLH	6/2/10	1610
Chlorobenzene	D021	8260B	0.005	100	< 0.005	mg/L	TAG	5/26/10	1653
Chloroform	D022	8260B	0.005	6	< 0.005	mg/L	TAG	5/26/10	1653
Chromium	D007	6010C	0.001	5	< 0.001	mg/L	TLG	5/28/10	1244

REPORT OF ANALYSIS

SAMPLE ID: BELT PRESS SLUDGE CAKE
SAMPLE NO 10-08076

Parameter	EPA HW No.	Method Number	JRA QL	Regulatory Level	Result	Unit	Analyst/Date/Time		
o-Cresol	D023	8270D	0.025	200	< 0.025	mg/L	CLH	6/2/10	1610
m/p-Cresol	D024	8270D	0.02	200	< 0.02	mg/L	CLH	6/2/10	1610
Cresol	D026	8270D	0.02	200	< 0.02	mg/L	CLH	6/2/10	1610
2,4-D	D016	8151A	0.004	10	< 0.004	mg/L	DLL	6/2/10	2144
1,4-Dichlorobenzene	D027	8260B	0.005	7.5	< 0.005	mg/L	TAG	5/26/10	1653
1,2-Dichloroethane	D028	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
1,1-Dichloroethylene	D029	8260B	0.005	0.7	< 0.005	mg/L	TAG	5/26/10	1653
2,4-Dinitrotoluene	D030	8270D	0.025	0.13	< 0.025	mg/L	CLH	6/2/10	1610
Endrin	D012	8270D	0.005	0.02	< 0.005	mg/L	CLH	6/2/10	1610
Heptachlor (+epoxide)	D031	8270D	0.005	0.008	< 0.005	mg/L	CLH	6/2/10	1610
Hexachlorobenzene	D032	8270D	0.025	0.13	< 0.025	mg/L	CLH	6/2/10	1610
Hexachloro-1,3-butadiene	D033	8270D	0.025	0.5	< 0.025	mg/L	CLH	6/2/10	1610
Hexachloroethane	D034	8270D	0.025	3	< 0.025	mg/L	CLH	6/2/10	1610
Lead	D008	6010C	0.005	5	< 0.005	mg/L	TLG	5/28/10	1244
Lindane	D013	8270D	0.025	0.4	< 0.025	mg/L	CLH	6/2/10	1610
Mercury	D009	6010C	0.005	0.2	< 0.005	mg/L	TLG	5/28/10	1244
Methoxychlor	D014	8270D	0.025	10	< 0.025	mg/L	CLH	6/2/10	1610
Methyl ethyl Ketone	D035	8260B	0.1	200	< 0.1	mg/L	TAG	5/26/10	1653
Nitrobenzene	D036	8270D	0.025	2	< 0.025	mg/L	CLH	6/2/10	1610
Pentachlorophenol	D037	8270D	0.1	100	< 0.1	mg/L	CLH	6/2/10	1610
Pyridine	D038	8270D	0.025	5	< 0.025	mg/L	CLH	6/2/10	1610
Selenium	D010	6010C	0.005	1	< 0.005	mg/L	TLG	5/28/10	1244
Silver	D011	6010C	0.001	5	< 0.001	mg/L	TLG	5/28/10	1244
Tetrachloroethylene	D039	8260B	0.005	0.7	< 0.005	mg/L	TAG	5/26/10	1653
Toxaphene	D015	8270D	0.1	0.5	< 0.1	mg/L	CLH	6/2/10	1610
Trichloroethylene	D040	8260B	0.005	0.5	< 0.005	mg/L	TAG	5/26/10	1653
2,4,5-Trichlorophenol	D041	8270D	0.025	400	< 0.025	mg/L	CLH	6/2/10	1610
2,4,6-Trichlorophenol	D042	8270D	0.025	2	< 0.025	mg/L	CLH	6/2/10	1610
2,4,5-TP	D017	8151A	0.004	1	< 0.004	mg/L	DLL	6/2/10	2144
Vinyl Chloride	D043	8260B	0.01	0.2	< 0.01	mg/L	TAG	5/26/10	1653

REPORT OF ANALYSIS

NOTE: JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

Flashpoints <60oC are considered hazardous according to Hazardous Waste Characterization Guidelines.

RESPECTFULLY SUBMITTED

Elaine Claiborne
Laboratory Director
04-Jun-10

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** KING GEORGE COUNTY SERVICE AUTHORITY

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Yes ☐ No ☒

3. **Provide the tax map parcel number for the land where the discharge is located.** 23 – 77B

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** **0.0**

5. **What is the design average effluent flow of this facility?** **0.375** MGD
For industrial facilities, provide the max. 30-day average production level, include units:

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☒ No ☐
If "Yes", please identify the other flow tiers (in MGD) or production levels:
0.5 MGD

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**

---

100 % of flow from domestic connections/sources

Number of private residences to be served by the treatment works: **334**

____ % of flow from non-domestic connections/sources

7. **Mode of discharge:** ☐ Continuous ☒ Intermittent ☐ Seasonal
Describe frequency and duration of intermittent or seasonal discharges:
3- 4 per month 8 to 10 days apart. Average 39 times per year. Average 0.0221 MG per discharge day

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**

X Permanent stream, never dry

____ Intermittent stream, usually flowing, sometimes dry

____ Ephemeral stream, wet-weather flow, often dry

____ Effluent-dependent stream, usually or always dry without effluent flow

____ Lake or pond at or below the discharge point

____ Other: _____

9. **Approval Date(s):** [Revised O&M Manual submitted: October 7, 2008]
O & M Manual JUNE 2011 **Sludge/Solids Management Plan** JANUARY 2005

Have there been any changes in your operations or procedures since the above approval dates? Yes ☐ No ☒

VPDES SEWAGE SLUDGE PERMIT APPLICATION FORM

SCREENING INFORMATION

This application is divided into four sections. Section A pertains to all applicants. The applicability of Sections B, C and D depends on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Does this facility generate sewage sludge? __X__ Yes _____ No

   Does this facility derive a material from sewage sludge? _____ Yes __X__ No

   If you answered "Yes" to either, complete Section B (Generation Of Sewage Sludge or Preparation Of A Material Derived From Sewage Sludge).

3. Does this facility apply sewage sludge to the land? _____ Yes __X__ No

   Is sewage sludge from this facility applied to the land? _____ Yes __X__ No

   If you answer "No" to all above, skip Section C.

   If you answered "Yes" to either, answer the following three questions:

   a. Does the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions? _____ Yes _____ No

   b. Is sewage sludge from this facility placed in a bag or other container for sale or give-away for application to the land? _____ Yes _____ No

   c. Is sewage sludge from this facility sent to another facility for treatment or blending? _____ Yes _____ No

   If you answered "No" to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

   If you answered "Yes" to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? _____ Yes __X__ No

   If "Yes", complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.

a. Facility name: **HOPYARD FARMS WASTEWATER TREATMENT PLANT**

b. Contact person: **Christopher F. Thomas P.E**

Title: **General Manager**

Phone: **(540) 775-2746**

c. Mailing address:

Street or P.O. Box: **9207 Kings Highway**

City or Town: **King George** State: **VA** Zip: **22485**

d. Facility location:

Street or Route #: **State Road 607, south of the intersection of State Route 3 and 607**

County: **King George**

City or Town: **King George** State: **VA** Zip: **22485**

e. Is this facility a Class I sludge management facility? _____ Yes __X__ No

f. Facility design flow rate: **0.375** mgd

g. Total population served: **334**

h. Indicate the type of facility:

__X__ Publicly owned treatment works (POTW)

_____ Privately owned treatment works

_____ Federally owned treatment works

_____ Blending or treatment operation

_____ Surface disposal site

_____ Other (describe): _____

2. Applicant Information. If the applicant is different from the above, provide the following:

a. Applicant name: **King George County Service Authority**

b. Mailing address:

Street or P.O. Box: **9207 Kings Highway**

City or Town: **King George** State: **VA** Zip: **22485**

c. Contact person: **Christopher F. Thomas**

Title: **General Manager**

Phone: **(540) 775-2746**

d. Is the applicant the owner or operator (or both) of this facility?
__X__ owner __X__ operator

e. Should correspondence regarding this permit be directed to the facility or the applicant?
_____ facility __X__ applicant

3. Permit Information.

a. Facility's VPDES permit number (if applicable): **VA0089338**

b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:

Permit Number:	Type of Permit:
VDH-RAHD-12	Sewage Handling Permit VA0086789

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? _____ Yes __X__ No If "Yes", describe:

5. **Topographic Map.** Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility **See FIGURE 1**
   a. Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed.
   b. Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries.

6. **Line Drawing.** Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction. – **SEE ATTACHMENTS D**

7. **Contractor Information.** Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? **X** Yes _____ No

   If "Yes", provide the following for each contractor (attach additional pages if necessary).

   Name: **WASTE MANAGEMENT**

   Mailing address:

   Street or P.O. Box: **45 Utah Place**

   City or Town: **Falmouth** State: **VA** Zip: **22485**

   Phone: **(800) 969-2069**

   Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:

   VIRGINIA Department of Environmental Quality Permit # for King George Landfill: 586

   If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).

8. **Pollutant Concentrations.** Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old. **[SEE ATTACHMENT C – BELT PRESS CAKE REPORT OF ANALYSIS]**

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic	< 0.005 mg/L	05/08/2010	7060	0.05 mg/L
Cadmium	0.0077 mg/L	05/08/2010	7130	0.10 mg/L
Chromium	< 0.001mg/L	05/08/2010	7190	0.50 mg/L
Copper				
Lead	< 0.005 mg/L	05/08/2010	7420	0.50 mg/L
Mercury	< 0.005 mg/L	05/08/2010	7471	0.02 mg/L
Molybdenum				
Nickel				
Selenium	< 0.005 mg/L	05/08/2010	7740	0.05 mg/L
Zinc				

9. **Certification.** Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have completed and are submitting:

__X__ Section A (General Information)

__X__ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

_____ Section C (Land Application of Bulk Sewage Sludge)

_____ Section D (Surface Disposal)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and official title: **Christopher F. Thomas, General Manager**

Signature _____ Date Signed 10-21-2011

Telephone number: **(540) 775-2746**

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION OF A MATERIAL DERIVED FROM SEWAGE SLUDGE

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. **Amount Generated On Site.** **(Note: sludge is combined at the Dahlgren wastewater treatment plant)**
Total dry metric tons per 365-day period generated at your facility: **8.4 (Hopyard Farms WWTP portion)** dry metric tons

2. **Amount Received from Off Site.** If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.

   a. Facility name: N/A

   b. Contact Person: N/A

      Title: N/A

      Phone: N/A

   c. Mailing address:

      Street or P.O. Box: N/A

      City or Town: N/A State: N/A Zip: N/A

   d. Facility location: N/A

      (not P.O. Box)

   e. Total dry metric tons per 365-day period received from this facility: N/A dry metric tons

   f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

N/A

3. **Treatment Provided at Your Facility.**

   a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
   _____ Class A _____ Class B __X__ Neither or unknown

   b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: Aerobic Digestion – Sludge is hauled to the Dahlgren wastewater treatment plant for further digestions and dewatering prior to disposal at the landfill

   c. Which vector attraction reduction option is met for the sewage sludge at your facility?

   _____ Option 1 (Minimum 38 percent reduction in volatile solids)

   _____ Option 2 (Anaerobic process, with bench-scale demonstration)

   _____ Option 3 (Aerobic process, with bench-scale demonstration)

   _____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

   _____ Option 5 (Aerobic processes plus raised temperature)

   _____ Option 6 (Raise pH to 12 and retain at 11.5)

   _____ Option 7 (75 percent solids with no unstabilized solids)

   _____ Option 8 (90 percent solids with unstabilized solids)

   __X__ None or unknown

   d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: N/A

   e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: N/A

4. **Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and**

One of Vector Attraction Reduction Options 1-8 (EQ Sludge).

(If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land:

N/A_____ dry metric tons

b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?

_____ Yes _____ No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land.

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: N/A_____ dry metric tons

b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending.

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name: **Dahlgren WWTP**

b. Facility contact: **Christopher F. Thomas P.E**

Title: **General Manager**

Phone: **(540)775-2746**

c. Mailing address:

Street or P.O. Box: **9207 Kings Highway**

City or Town: **King George** State: **VA** Zip: **22485**

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility:

8.4 dry metric tons

e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:	Type of Permit:
VA0026514	VPDES Municipal **Major**

f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility?

X Yes _____ No

Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?

_____ Class A _____ Class B **X** Neither or unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge: Aerobic Digestion

g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? _____ Yes **X** No

Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

X Option 1 (Minimum 38 percent reduction in volatile solids)

_____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge:

Sludge is aerobically digested at the 1.0 MGD Dahlgren WWTP in four digesters with a total volume of approximately 166,784 gallons. This digester volume provides more than 40 days retention time resulting in 40% to 50% volatile solids reduction at full design capacity. The Dahlgren WWTP is currently operating at 25% its design capacity.

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above?
_____ Yes __X__ No

If "Yes", describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

_____

_____

i. If you answered "Yes" to f, g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

j Does the receiving facility place sewage sludge from your facility in a bag or other container for sale or give-away for application to the land? _____ Yes __X__ No

If "Yes", provide a copy of all labels or notices that accompany the product being sold or given away.

k. Will the sewage sludge be transported to the receiving facility in a truck-mounted watertight tank normally used for such purposes? __X__ Yes _____ No. If "No", provide description and specification on the vehicle used to transport the sewage sludge to the receiving facility.

Show the haul route(s) on a location map or briefly describe the haul route below and indicate the days of the week and the times of the day sewage sludge will be transported: From the treatment site on Route #607, the truck will travel north/east on Route #3 onto Route #301 North. The truck route continues onto Route #206 and the treatment plant/discharge location is approximately 0.5 miles southeast of U.S. Route 30 I. Sludge is haul 1/month

To prevent nuisance to the populace along the hauling routes, the contractor will be required to haul during business hours of 7:30 AM - 5:00 PM, Monday through Friday.

7. Land Application of Bulk Sewage Sludge. N/A

(Complete Question 7.a if sewage sludge from your facility is applied to the land, unless the sewage sludge is covered in Questions 4, 5 or 6. Complete Question 7.b, c & d only if you are responsible for land application of sewage sludge.)

a. Total dry metric tons per 365-day period of sewage sludge applied to all land application sites:

N/A_____ dry metric tons

b. Do you identify all land application sites in Section C of this application? _____ Yes _____ No

If "No", submit a copy of the Land Application Plan (LAP) with this application (LAP should be prepared in accordance with the instructions).

c. Are any land application sites located in States other than Virginia? _____ Yes _____ No

If "Yes", describe, on this form or on another sheet of paper, how you notify the permitting authority for the States where the land application sites are located. Provide a copy of the notification.

_____

_____

d. Attach a copy of any information you provide to the owner or lease holder of the land application sites to comply with the "notice and necessary" information requirement of 9 VAC 25-31-530 F and/or H (Examples may be obtained in Appendix IV).

8. Surface Disposal. N/A

(Complete Question 8 if sewage sludge from your facility is placed on a surface disposal site.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility placed on all surface disposal sites: N/A_____ dry metric tons

b. Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?
_____ Yes _____ No

If "No", answer questions c - g for each surface disposal site that you do not own or operate. If you send sewage sludge to more than one surface disposal site, attach additional pages as necessary.

c. Site name or number: N/A_____

d. Contact person: N/A_____

Title: N/A_____

Phone: N/A_____

Contact is: _____ Site Owner _____ Site operator

e. Mailing address:

Street or P.O. Box: N/A_____

City or Town: N/A_____ State: N/A_____ Zip: N/A_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility placed on this surface disposal site: **N/A**_____ dry metric tons

g. List, on this form or an attachment, the surface disposal site VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the sewage sludge use or disposal practices at the surface disposal site:

Permit Number:	Type of Permit:
N/A	**N/A**

9. Incineration. N/A

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: **N/A**_____ dry metric tons

b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
_____ Yes _____ No

If "No", answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.

c. Incinerator name or number: **N/A**_____

d. Contact person: **N/A**_____

Title: **N/A**_____

Phone: **N/A**_____

Contact is: _____ Incinerator Owner _____ Incinerator Operator

e. Mailing address:

Street or P.O. Box: **N/A**_____

City or Town: **N/A**_____ State: N/A_____ Zip: **N/A**_____

f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: **N/A**_____ dry metric tons

g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing

of sewage sludge at this incinerator:

Permit Number:	Type of Permit:
N/A	N/A

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

a. Landfill name: **King George County Landfill**

b. Contact person: **Jeff Jenkins**

Title: **Director of Sludge Waste**

Phone: **(540) 775-3123**

Contact is: **X** Landfill Owner _____ Landfill Operator

c. Mailing address:

Street or P.O. Box: **10459 Courthouse Road, Suite 200**

City or Town: King George State: VA Zip: **22485**

d. Landfill location.

Street or Route #: **10376 Bullock Drive**

County: **King George**

City or Town: **King George** State: **VA** Zip: **22485**

e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:

124 dry metric tons (1,184 wet (~20% solids) tons for the period Jan 2009 – Nov 2010 – WM records)

f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:

Permit Number:	Type of Permit:
586	DEQ
5249	Waste Management Approval Code (King George Landfill)

g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
X Yes _____ No

h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? **X** Yes _____ No

i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? **X** Yes _____ No

Show the haul route (s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported: See Sludge Management Plan (MAP for route, sludge is transported Mon-Fri 6 a.m. – 6 p.m.)

Haul Route:

--- From Dahlgren WWTP take Rt. 206 to Rt. 301,
--- Turn left on to Rt. 301 South,
--- Turn right onto Rt. 205 at light,
--- Turn right onto Rt. 3 west at light,
--- Turn right onto Birchwood Creek Rd.

--- End at King George County Landfill.

SECTION C. LAND APPLICATION OF BULK SEWAGE SLUDGE - N/A

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

- ***The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or***
- ***The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or***
- ***You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).***

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site.

a. Site name or number: N/A_____

b. Site location (Complete i and ii)

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

a. Are you the owner of this land application site? _____ Yes _____ No

b. If "No", provide the following information about the owner:

Name: _____

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

Phone: (_____) _____

3. Applier Information:

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site?
_____ Yes _____ No

b. If "No", provide the following information for the person who applies the sewage sludge:

Name: _____

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

Phone: (_____) _____

c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:

Permit Number:	Type of Permit:
_____	_____
_____	_____

4. Site Type. Identify the type of land application site from among the following:

_____ Agricultural land _____ Reclamation site _____ Forest

_____ Public contact site _____ Other (describe _____

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?
_____ Yes _____ No If "Yes", answer a and b.

a. Indicate which vector attraction reduction option is met:

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

_____

_____

6. Cumulative Loadings and Remaining Allotments.

(Complete Question 6 only if the sewage sludge applied to this site since July 20, 1993 is subject to the cumulative pollutant loading rates (CPLRs) - see instructions.)

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? _____ Yes _____ No

If "No", sewage sludge subject to the CPLRs may not be applied to this site.

If "Yes", provide the following information:

Permitting authority: _____

Contact person: _____

Phone: (_____) _____

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? _____ Yes _____ No If "No", skip the rest of Question 6. If "Yes", answer questions c - e.

c. Site size, in hectares: _____ (one hectare = 2.471 acres)

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

Facility name: _____

Facility contact: _____

Title: _____

Phone: (_____) _____

Mailing address.

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

e. Provide the total loading and allotment remaining, in kg/hectare, for each of the following pollutants:

	Cumulative loading	Allotment remaining
Arsenic	_____	_____
Cadmium	_____	_____
Copper	_____	_____
Lead	_____	_____
Mercury	_____	_____
Nickel	_____	_____
Selenium	_____	_____
Zinc	_____	_____

Complete Questions 7-12 below only if you apply sewage sludge, or you are responsible for land application of sewage sludge. Information required by these questions may be prepared as attachments to this form. Skip the following questions if you contract land application to someone else (as indicated under Section A.7) who is responsible for the operation.

7. **Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

PCBs (mg/kg)	_____
pH (S. U.)	_____
Percent Solids (%)	_____
Ammonium Nitrogen (mg/kg)	_____
Nitrate Nitrogen (mg/kg)	_____
Total Kjeldahl Nitrogen (mg/kg)	_____
Total Phosphorus (mg/kg)	_____
Total Potassium (mg/kg)	_____
Alkalinity as $CaCO_3^*$ (mg/kg)	_____

* Lime treated sludge (10% or more lime by dry weight) should be analyzed for percent $CaCO_3$.

8. **Storage Requirements.**

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.

1) Water wells, abandoned or operating
2) Surface waters
3) Springs
4) Public water supply(s)
5) Sinkholes
6) Underground and/or surface mines
7) Mine pool (or other) surface water discharge points
8) Mining spoil piles and mine dumps
9) Quarry(s)
10) Sand and gravel pits
11) Gas and oil wells
12) Diversion ditch(s)
13) Agricultural drainage ditch(s)
14) Occupied dwellings, including industrial and commercial establishments
15) Landfills or dumps
16) Other unlined impoundments
17) Septic tanks and drainfields
18) Injection wells
19) Rock outcrops

b. A topographic map of sufficient detail to clearly show the following information:

1) Maximum and minimum percent slopes
2) Depressions on the site that may collect water
3) Drainageways that may attribute to rainfall run-on to or runoff from this site
4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding

c. Data and specifications for the storage facility lining material.

d. Plan and cross-sectional views of the storage facility.

e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. **Land Area Requirements.** Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings

(CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. Landowner Agreement Forms. Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

11. Ground Water Monitoring.

Are any ground water monitoring data available for this land application site? _____ Yes _____ No

If "Yes", submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. Land Application Site Information.

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

a. Provide a general location map for each county which clearly indicates the location of all the land application sites.

b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.

c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U.S. Fish and Wildlife Service
Virginia Field Office
P.O. Box 480
White Marsh, VA 23183
TEL: (804) 693-6694

Provide a copy of the notification letter with this application form.

d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)

Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

Item e - h are required for sites receiving frequent application of sewage sludge

e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:

1) Soil symbol
2) Soil series, textural phase and slope range
3) Depth to seasonal high water table
4) Depth to bedrock
5) Estimated soil productivity group (for the proposed crop rotation)

f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the following parameters.

Soil Organic Matter (%) _____

Soil pH (std. units) _____

Cation Exchange Capacity (meq/100g) _____
Total Nitrogen (ppm) _____
Organic Nitrogen (ppm) _____
Ammonia Nitrogen (ppm) _____
Nitrate Nitrogen (ppm) _____
Available Phosphorus (ppm) _____
Exchangeable Potassium (mg/100g) _____
Exchangeable Sodium (mg/100g) _____
Exchangeable Calcium (mg/100g) _____
Exchangeable Magnesium (mg/100g) _____
Arsenic (ppm) _____
Cadmium (ppm) _____
Copper (ppm) _____
Lead (ppm) _____
Mercury (ppm) _____
Molybdenum (ppm) _____
Nickel (ppm) _____
Selenium (ppm) _____
Zinc (ppm) _____
Manganese (ppm) _____
Particle Size Analysis or USDA Textural Estimate (%) _____

g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.

h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

SEWAGE SLUDGE APPLICATION AGREEMENT - N/A

This sewage sludge application agreement is made on this date _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:	Permittee:
_____	_____
Signature	Signature
_____	_____
Mailing Address	Mailing Address

SECTION D. SURFACE DISPOSAL – N/A

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units.

a. Unit name or number: N/A_____

b. Unit location

i. Street or Route#: _____

County: _____

City or Town: _____ State: _____ Zip: _____

ii. Latitude: _____ Longitude: _____

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:

_____ dry metric tons.

e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:

_____ dry metric tons.

f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1×10^{-7} cm/sec?
_____ Yes _____ No If "Yes", describe the liner or attach a description.

_____

_____

g. Does the active sewage sludge unit have a leachate collection system? _____ Yes _____ No

If "Yes", describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:

_____

_____

_____

h. If you answered "No" to either f or g, answer the following:
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? _____ Yes _____ No If "Yes", provide the actual distance in meters: _____

i. Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons

Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)

Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? _____ Yes _____ No

If "Yes", provide the following information for each such facility, attach additional sheets as necessary.

a. Facility name: _____

b. Facility contact: _____

Title: _____

Phone: (_____) _____

c. Mailing address:

Street or P.O. Box: _____

City or Town: _____ State: _____ Zip: _____

d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:

Permit Number: Type of Permit:

_____ _____

_____ _____

e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?
_____ Class A _____ Class B _____ Neither or unknown

f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge: _____

_____

_____

g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?

_____ Option 1 (Minimum 38 percent reduction in volatile solids)

_____ Option 2 (Anaerobic process, with bench-scale demonstration)

_____ Option 3 (Aerobic process, with bench-scale demonstration)

_____ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

_____ Option 5 (Aerobic processes plus raised temperature)

_____ Option 6 (Raise pH to 12 and retain at 11.5)

_____ Option 7 (75 percent solids with no unstabilized solids)

_____ Option 8 (90 percent solids with unstabilized solids)

_____ None or unknown

h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge: _____

_____

_____

i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above: _____

_____

_____

3. Vector Attraction Reduction.

a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?

_____ Option 9 (Injection below land surface)

_____ Option 10 (Incorporation into soil within 6 hours)

_____ Option 11 (Covering active sewage sludge unit daily)

b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge: _____

_____

_____

4. Ground Water Monitoring.

a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? _____ Yes _____ No

If "Yes", provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these

data.

b. Has a ground water monitoring program been prepared for this active sewage sludge unit?
_____ Yes _____ No If "Yes", submit a copy of the ground water monitoring program with this application.

c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? _____ Yes _____ No

If "Yes", submit a copy of the certification with this application.

5. Site-Specific Limits.

Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
_____ Yes _____ No If "Yes", submit information to support the request for site-specific pollutant limits with this application.

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

– ATTACHMENT C –

SLUDGE HANDLING

SLUDGE DISPOSAL PLAN

SLUDGE DISPOSAL ROUTES

FACILITY NAME AND PERMIT NUMBER:

Hopyard Farms Wastewater Treatment Plant VPDES # VA0089338

SLUDGE DISPOSAL PLAN

FOR THE

HOPYARD WASTEWATER TREATMENT PLANT

The Hopyard Farms wastewater treatment plant is a Sequencing Batch Reactor plant which treats domestic wastewater from the Hopyard Farms subdivision. The Plant capacity is 375,000 gallons per day; it is comprised of a comminutor, two Sequencing Batch Reactor basins, a post-equalization basin, UV Disinfection units, and a post aeration basin. Sludge from the SBR basins is decanted to an aerobic digester for reduction of solids. Solids are removed from the aerobic digester and transported to the Dahlgren Wastewater Treatment Facility for dewatering.

Ultimately, solids are disposed at the King George County Landfill. The operator shall refer to the King George County Sludge Management Plan prepared by CH2M Hill and dated January 2005, in addition to this report, for information concerning sludge disposal for this facility.

AEROBIC DIGESTER

Volume Aeration:	112,596 Gallons capacity
Diffused air:	180 scfm (from 15 fine bubble diffusers to maintain dissolved oxygen)
Floating Mixer:	5 HP to enhance aeration

QUANTITY AND QUALITY OF SLUDGE

Based on a treatment scheme involving the Sequencing Batch Reactor process, the approximate volume of sludge to be wasted to the aerobic digester each day is 360 c.f., or about 2,700 gallons at full build-out. Assuming a 20-25% reduction of solids and a maximum decanting of the supernatant before sludge withdrawal, 60,750 gallons of sludge must be pumped each month.

The sludge will be municipal in nature.

SLUDGE REMOVAL

With a total sludge holding capacity of 112,596 gallons, the holding tank has a capacity of 41 days (or 55 days, if decanting is practiced). For routine scheduling purposes, the sludge is to be pumped from the tank monthly. Visual inspection by the operator will determine when pumping must be accomplished. The exact day of the sludge pumping will be noted in plant records for examination by the Virginia Department of Environmental Quality.

SLUDGE HAULING

Sludge pumping and hauling will be accomplished by the King George County Service Authority (KGCSA) or a reputable septic tank service company to be determined at the time of pumping.

It is explicitly understood that KGCSA will have final responsibility to insure the sludge is disposed of correctly.

The hauling contractor will haul the sludge in a non-spill watertight tank mounted on a truck normally used for such operations. He will haul it to the Dahlgren Wastewater Treatment Plant owned by KGCSA, where it will be dewatered and ultimately disposed of at the King George County Landfill.

TRANSPORTATION ROUTE AND TIMES

Routes used for hauling the sludge are as shown on the attached map and are briefly described below:

From the treatment site on Route #607, the truck will travel north/east on Route #3 onto Route #301 North. The truck route continues onto Route #206 and the treatment plant/discharge location is approximately 0.5 miles southeast of U.S. Route 30 I.

To prevent nuisance to the populace along the hauling routes, the contractor will be required to haul during business hours of 7:30 AM - 5:00 PM, Monday through Friday.

SLUDGE TREATMENT

The sludge hauler will be responsible for meeting all requirements placed on him by KGCSA; these requirements include:

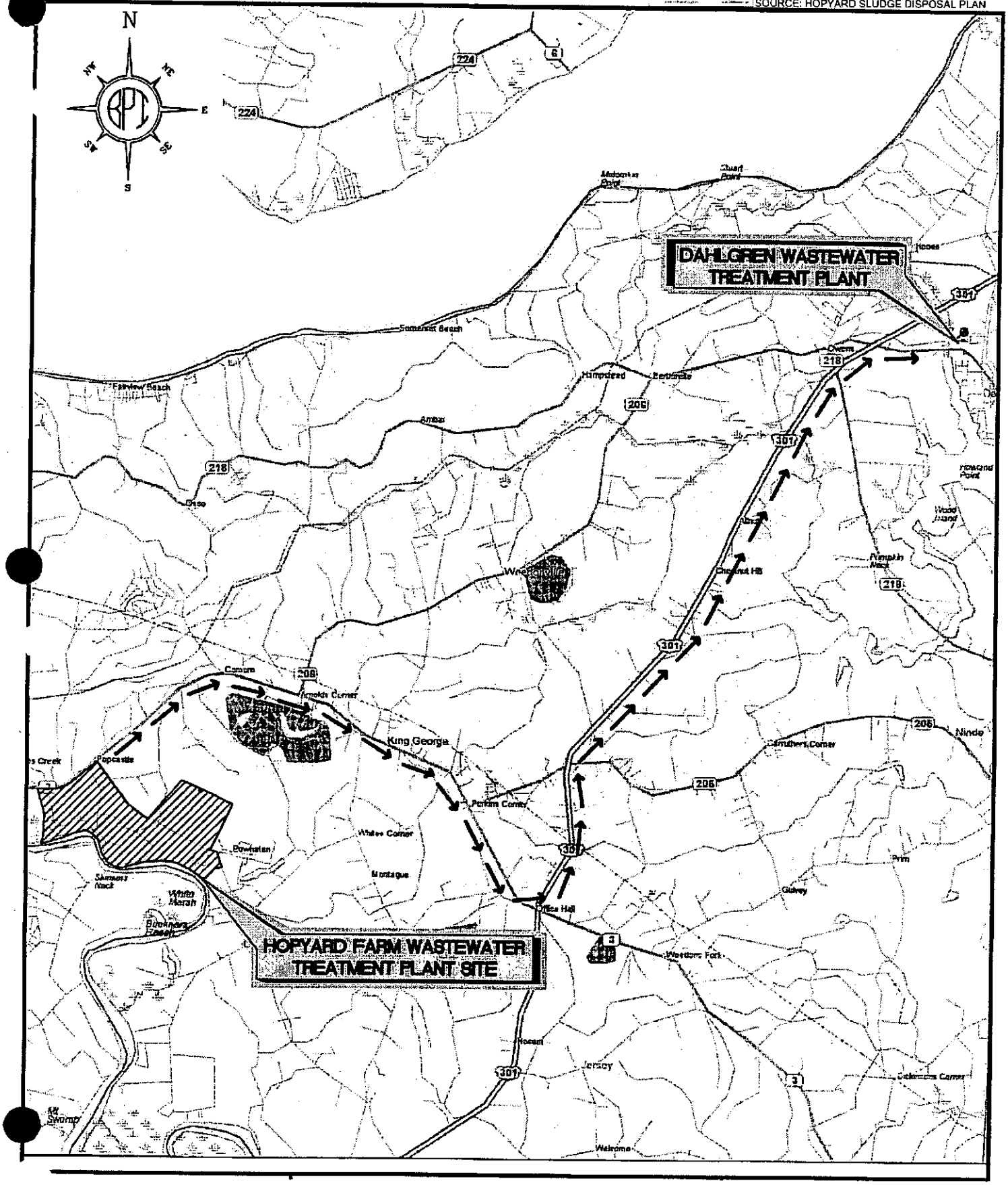
1) Checking and maintaining the proper pH (approximately 7.0) before dumping.
2) Cleanup of any spillage during delivery, or performance of any other cleanup operation as deemed necessary by the KGCSA due to the delivery of sludge.

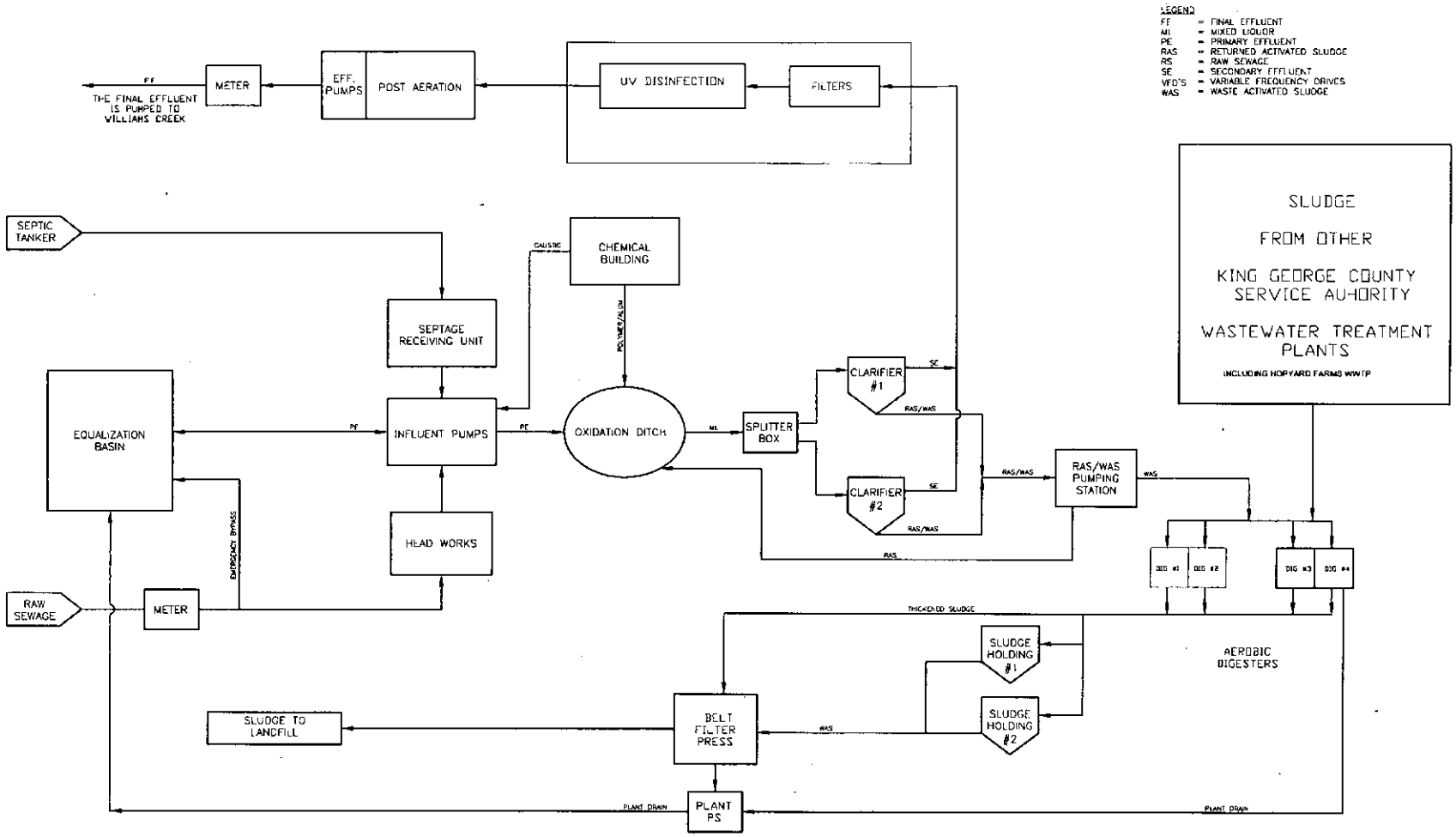
After delivery of the sludge, the KGCSA will be solely responsible for final disposal thereof. The hauling contractor will report the quality of sludge delivered, the time of day, and the exact method of disposal. In turn, KGCSA shall note this on the regular monthly operating report.

SLUDGE HAUL ROUTE: HOPYARD FARM WWTP TO DAHLGREN WWTP

RSTAR ENGINEERING LLC.

PROJECT No.:40830-28-11
DATE: 10/21/2011
SOURCE: HOPYARD SLUDGE DISPOSAL PLAN





RETAW ENGINEERING LLC.
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COMBINED COUNTY SLUDGE DIGESTION & DEWATERING

DAHLGREN WASTEWATER TREATMENT PLANT

KING GEORGE COUNTY, VIRGINIA

REVISIONS

YEAR 2010
VPDES PERMIT

DESIGNED BY:	GM
DRAWN BY:	MCP / GM
CHECKED BY:	TD
SCALE:	AS SHOWN
DATE:	12/07/2010
PROJECT NUMBERS:	40520-23-10 40520-24-10

PFD

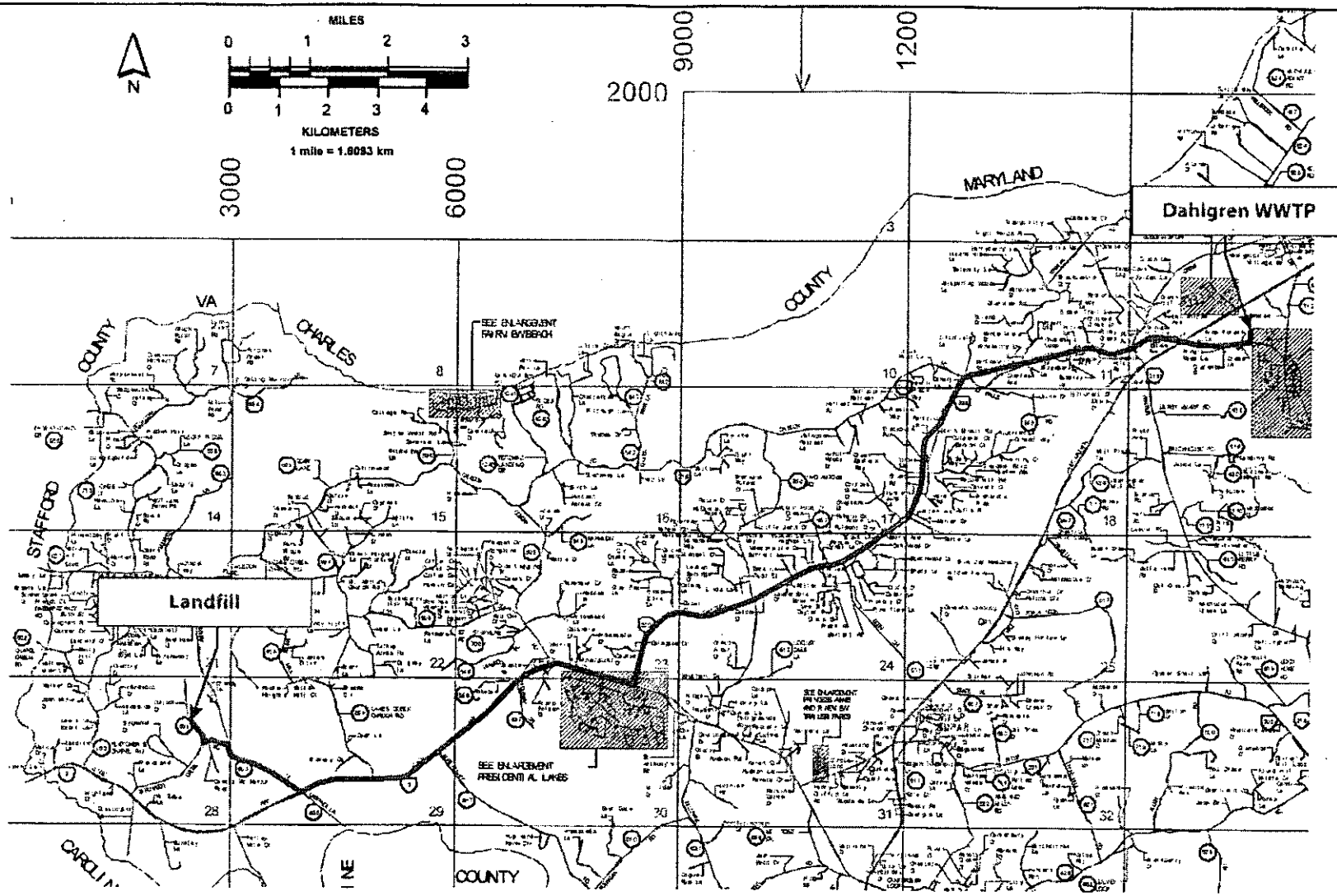

Figure B-5
Dalgren WWTP to USA Waste Landfill

CH2MHILL